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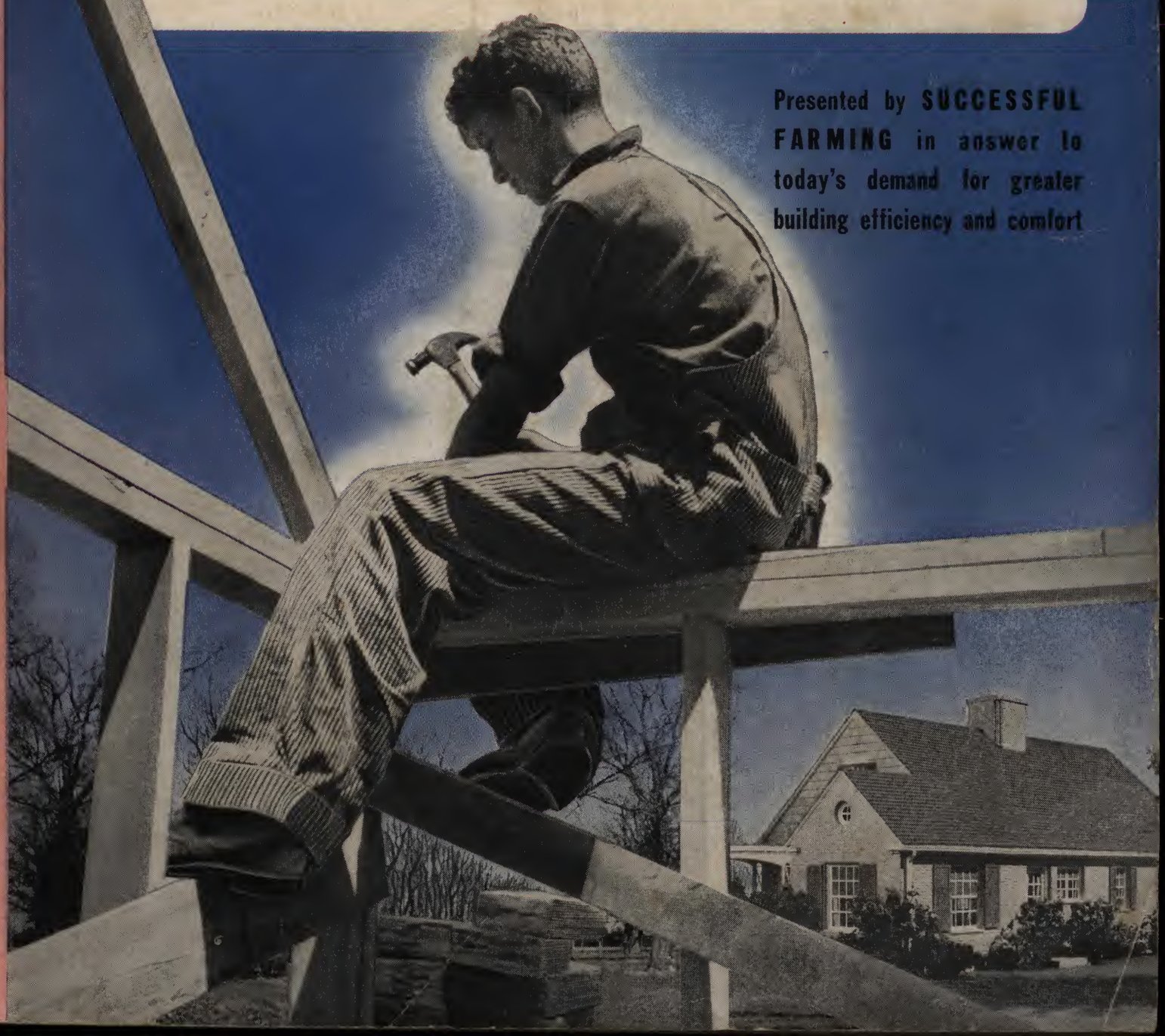
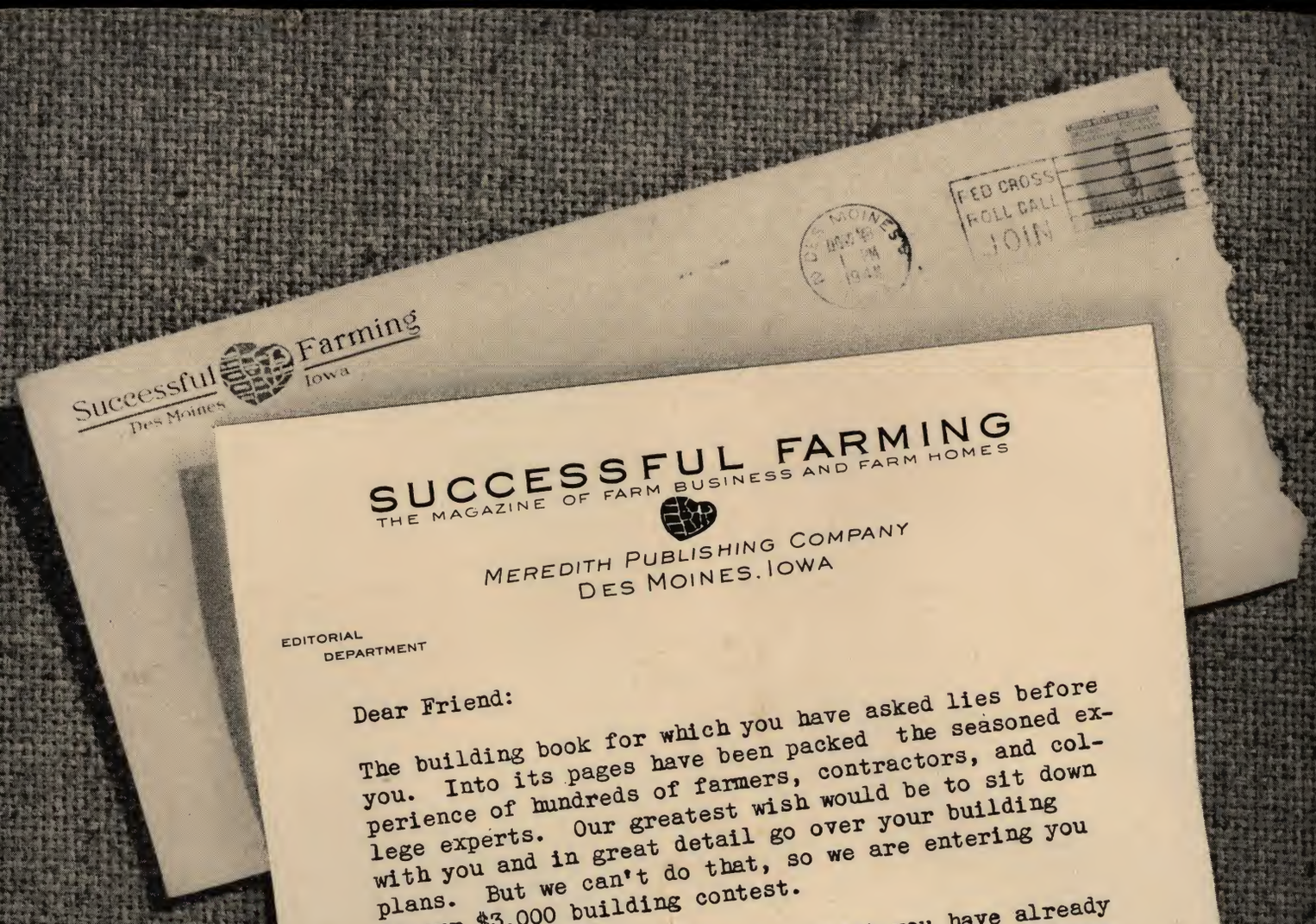
Successful Homes and Service Buildings



Presented by SUCCESSFUL FARMING in answer to today's demand for greater building efficiency and comfort

• BILDCOST FARM HOMES • HOME FURNISHINGS SECTION • BLUEPRINTS AND LISTS OF MATERIALS FOR SERVICE BUILDINGS • PROVED DETAILS PLAN SHEETS •



SUCCESSFUL FARMING

THE MAGAZINE OF FARM BUSINESS AND FARM HOMES

MEREDITH PUBLISHING COMPANY
DES MOINES. IOWA

EDITORIAL
DEPARTMENT

Dear Friend:

The building book for which you have asked lies before you. Into its pages have been packed the seasoned experience of hundreds of farmers, contractors, and college experts. Our greatest wish would be to sit down with you and in great detail go over your building plans. But we can't do that, so we are entering you in our $3,000 building contest.

Thru your enrollment in this contest you have already received this outstanding book, and you will continue to receive thru the pages of Successful Farming the very latest ideas we can find on every detail of farm building. In addition, we want you to call on us directly whenever we may be helpful.

Farm income will be very good thru 1942. Certainly now is the right time to bring buildings and equipment up to a high standard. A dollar invested in a good, necessary building is yours to use for many years. The same dollar might be invested in numerous schemes, attractive today, but worthless tomorrow.

I am thoroly convinced this is the time to repair and build the structures needed for normal production on your farm so long as food production and other emergency efforts do not suffer as a consequence. I wish you well in your undertaking, and hope that sometime during the coming year it may be possible for us to stop in and say hello.

Sincerely yours,

Kirk Fox

Editor

Successful Homes and Service Buildings

Published by Successful Farming

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THE BEST BUILDINGS ARE BUILT

YOU'D be surprised how many people come to *Successful Farming* in the course of a year and say, "I need a new chicken house," or "I've always wanted more closet space, so we're going to build a new home." Just like that! But when we ask them how many hens the chicken house is to shelter, if they expect to increase production with the use of electricity, if they want a low-cost house for the present or a higher-cost structure to see them thru a few decades—well, they "just don't know." Or if we work up our nerve to the point of asking what's to go in the closets, we get: "Oh, a lot of things!"

Let us give you two examples. One was a charming lady who wanted a large storeroom in the middle of the house. She had a mental picture and was very enthusiastic about her idea. After working with her for a week over drawings and alterations and trying to list the things she wanted to put in this central treasure chest of hers, we gave the whole idea up. Why? She didn't have *anything* she wanted to put in it!

The other example was a Wisconsin farmer who had built a small, general-purpose barn. He didn't plan his horse stalls, just built them. But the two single stalls he put in were 6 feet wide instead of the 5 feet recommended. The result? One of his horses got half turned around in the stall, got stuck, and the farmer had to pull him out by the tail and limber him up from his all-night wedge.

We don't think you'd make such funny mistakes, but from a satisfaction and money-saving angle we do ask that you fill in the following plan sheets. They're not complete, they don't do the whole job. You can make up better plan sheets yourself. But if you'll fill in these of ours, you'll face whatever your building project may be with some idea of what you can and do expect from your investment. After you have determined that, the following hundreds of building ideas and suggestions will be 100 percent more helpful. Everyone in the building business knows that the *best* building is done right in the family planning circle, where mistakes are caught before they happen!

The House (remodeled or new)

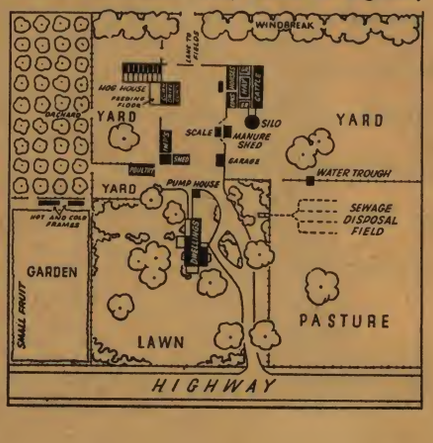
Personal Requirements for..... (A similar list should be made for each member of the family.) Major interests? ..... Need office or quiet study space? ..... Musical-instrument storage?..... Other play or hobby equipment and space?.....Active sports-equipment storage? ..... **Bedroom:** Separate? ..... Shared?..... Single beds, cots, cribs, twin beds? ..... Double bed? ..... Sleeping porch? ..... Size rooms preferred? ..... Prefer morning sun? ..... Sensitive to noise? ..... Cross-ventilation preferred? ..... Table at bedside? ..... Reads in bed? ..... Bedside phone, call bell, master switch? ..... Radio? ..... Electrical outlets, where? ..... **Clothing Storage:** (1. For everyday use) Length of hanging pole ..... ft. for ..... dresses ..... suits ..... coats. Hats and size. ..... Pairs of shoes ..... rack? ..... shoe bag? ..... cabinet shoe box.? ..... Wardrobe drawers for blouses, underwear, shirts, stockings, and so on? ..... (2. For out-of-season clothing) Cedar closets or standard closet? ..... Hanging pole length ..... ft. for ..... dresses ..... suits ..... heavy coats ..... hats ..... shoes. Wardrobe drawers for flannels, sweaters, woolens of all kinds? ..... Luggage? ..... **Dressing-Room:** Private?..... For use of two or more people? ..... Combined with bedroom or bath? ..... Built-in drawers or movable dressers? ..... Mirrors and kind?.....**Bathroom:** Private? ..... Shared? ..... Access from other

Ideas for Farmstead Arrangement:

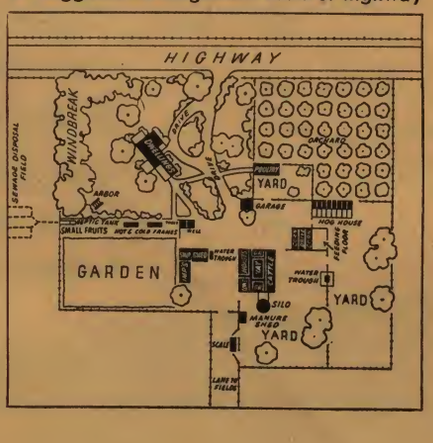
There are just two things to keep in mind when you survey your present farmstead plan. First, can you honestly say that you don't take an extra step in your chores, in getting the cattle up, in loading and trucking? If you can't, then your farm needs some thought to bring it into line today when labor's high and time short. Second, is your farmstead pleasant? That is, are the feed lots and hog pens so located that the prevailing summer breeze blows odors and dust *away* from the house? Are unsightly spots covered by a little native planting, a fence, or the placement of a shed so as to screen them? The answer here is important to what our Army calls "morale."

The four ideal arrangements shown on these pages are patterned after the USDA's *Farmers Bulletin 1132.* They are laid out for localities where the winter wind blows mostly from the northwest and the summer breeze from the south or southwest. A call to your county agent or local weather bureau will quickly tell you which way the wind blows at home. Any one of these arrangements can be shifted to take care of differences in prevailing

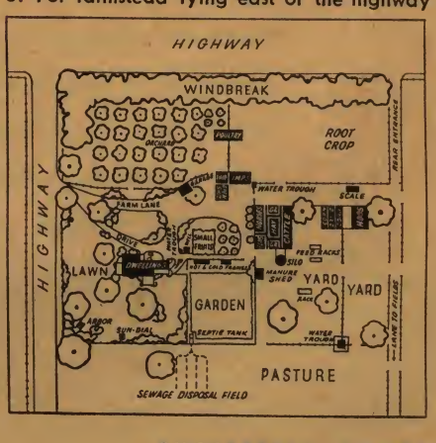
1. For farmstead lying north of highway



2. Suggested arrangement south of highway



3. For farmstead lying east of the highway



RIGHT HERE...

rooms? ..... Shower, tub, or both? ..... Medicine storage away from children? ..... medicine cabinet? ..... first-aid equipment? ..... Dressing tables, benches? ..... Mirrors, kind? ..... Electric outlets? ..... for water-heater ..... appliances ..... sun lamps ..... Scales and space? .....

Guest Requirements: How often afternoon or evening guests? ..... times weekly ..... times monthly ..... Types of parties most frequently given and average attendance over last several years? ..... Need first-floor lavatory or bathroom? ..... Basement lavatory? ..... Need storage space for wraps? ..... Need extra bedroom space?..... Need recreation room for extra foods service, workshop, dancing, sports, hobby display? .....

General Requirements for the Family: Water supply adequate and safe? (Allow 4 to 15 gallons per person if house is supplied with pitcher pump, 20 to 40 gallons per person if home is completely modern). ..... Reserve for summer watering and fire protection? ..... Gasoline pump or electric? ..... Sewage disposal? ..... Location of other buildings to be served. ..... Total number of gallons discharge per day. ..... Will sewage pipe have sufficient drop to septic tank and disposal field? ..... **Light and Power:** Number of reading lights, study lights, and where? ..... Number of general-illumination units and where? ..... Number of power-driven units within the house proper? ..... Separate circuits, heavy duty, are required for separators, the lifting motors, and so on. Are they provided for? ..... Separate circuits are indicated for heavy-duty heating units (the stove, for example). Are they provided for? ..... Have you made a half-hour's tour of your

winds. Notice, please, how the arrangements are figured so that the poultry yard is easily reached by Mother and the girls, the barns and sheds grouped in a convenient hookup to save Dad steps. That idea of having crib and hog houses close together is one we've seen work out time and time again!

A good windbreak (and it should have a fair proportion of evergreens) is a part of each of these arrangements. Windbreaks are best set out about 100 feet from the buildings they are to protect in order to allow your stock and equipment ample clearance. Fuel savings up to 20 percent have been credited to plantings; and stock and poultry do much better out of the sweep of winter winds. Note, too, how unsightly portions of the service areas have been screened. We think it better to give an uninterrupted view of the service area and put the screening shrubs in close to the offending buildings; that's the only quarrel we have with these plans.

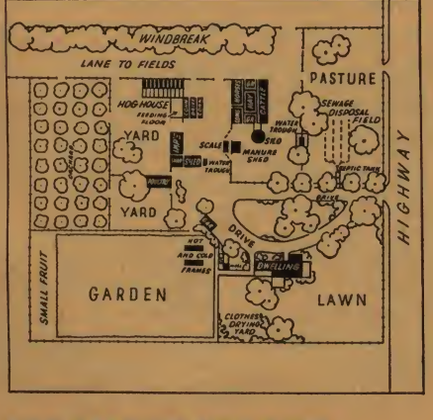
We're not advocating moving your present farmstead all around, naturally. But as one building outlives its usefulness or is remodeled, as you decide upon a basement for the old house or decide to build a new house, you *can* do something about arrangement. Make the house the hub of any plan and swing the rest around it. Then lay out a drive that approaches the house and service area in an easy sweep—straight drives are a landscaping eyesore. Split the drive with a by-pass so that heavy machinery and light cars won't be fighting for space. Have the home entrance on this drive; nobody walks in from the highway to the "front" door anymore. But they will use the entrance door if it's on the drive, and it will keep folks from prying into the kitchen constantly.

In figuring for a well, always place it at the highest point so there is no drainage *to* it. A slope to the south and east is the ideal farmstead location. And you'll need a gentle slope away from the well, the house, and the service buildings to locate your septic tank, the sewage for which is carried by flow.

Plan a surfaced parking area and a garage either attached or close in to the house. Remember the path of the sun in planning your kitchen and most-lived-in rooms; you want them cheery in winter. Barns should be placed with the long axis north and south to give some sunlight all day and to allow cooling summer breezes from the south to blow thru. Place the kitchen so that the housewife can keep an eye on the business when the men are away. Place your living-room with view in mind—preferably of a sweep of lawn, a garden, or distant fields.

If you're building new, select the site with the care of a field marshal. If you are rearranging to better what you have, begin with the fences, the drives, landscaping, perhaps a shift in house or smaller barns. You'll be surprised what a little "pencil farming" will do for you here.

4. This layout planned for west of highway



AND SERVICE BUILDING

The House (remodeled or new)

[*Continued from page 5*]

house or of the plans for it, trying to determine where convenience outlets should be located in order to have current available? ..... How many outlets do you need in: kitchen? ..... workroom? ..... furnace room? ..... basement in general? ..... bathroom? ..... living-room? ..... dining-room? ..... bedrooms? ..... sewing room and study or office? ..... hallways? ..... dark stairways? ..... closets? ..... playroom or recreation room? ..... other rooms unlisted? ..... In view of requirements, should house be serviced by own power plant, high line, or oil lamps and fuel-stove units? ..... **Heating:** In view of family numbers, health, ages, which heating system is best investment? Stoves ..... air-circulating heaters ..... floor furnaces ..... pipeless furnace ..... gravity furnace ..... forced warm-air furnace ..... steam radiators ..... hot-water .....

General Rooms

Kitchen: Size, shape for easy service? ..... View of drive and service areas? ..... Kinds and sizes ranges, refrigerators ..... Wall and counter cabinets and sizes? ..... Work surfaces, height, and finish? ..... Drawers, for what purposes and of what size? ..... Bulk storage of foods, flours? ..... Special space requirements? ..... Broom closet? .... Window size and placing? ..... Sink and type ..... Dishwasher? ..... List electrical equipment and other equipment now owned or hoped for in the future. ..... Ventilation ample? ..... Need fan? ..... Need for dinette or breakfast nook in kitchen? ..... Breakfast bar with push-in stools? ..... Wall finish, floor finish? ..... **Workroom:** Preferred location, ground or basement floor? ..... Access from kitchen and central rear hall? ..... Not connected to house or connected by a porch? ..... Flooring? (Should be durable, wet-proof for laundry.) ..... Side walls and ceiling (steam-resistant) ..... Convenience outlets ..... Washing machine and size? ..... Ironer and size? ..... Pressure cookers and size? ..... Vats and tubs and sizes? ..... Lines or racks for clothes-drying? ..... Type of heating? ..... Supplementary stove? ..... Mechanical ventilation? ..... Will separator and churn be used here? ..... **Living-Room:** Sized and placed for major family use? ..... Stress on fine comfort or child-proof durability in furnishings? ..... Lighting, windows, and views ..... Enough electrical outlets? ..... **Dining-Room:** Combined with living-room in dinette or breakfast nook? ..... Separate room? ..... Easily cleaned floors and wall surfaces? ..... Electrical outlets sufficient for table appliances planned? ..... Ample, cheerful window lighting? ..... **Central Rear Hall:** Come directly from service yards? ..... If so, provision for wash-up and clothes change in alcove, in workroom, in basement? ..... Give access to basement or upstairs by wide, "easy" stairs? ..... Connects workroom, kitchen, back porch, and living and dining quarters without waste space? .....

The Service Buildings (remodeled or new)

The barns, silos, colony and laying houses, sheds, garages, shops require planning even more carefully than the home, since from their efficient operation comes the cash that makes the home possible. In the following list of questions there is no attempt to break down to specific service buildings—the list of them is long and varied. But these questions will help you get the very most out of any service building you need to keep your farm an efficient producing unit, a food factory, and a creditable unit in the American scheme of sufficiency and Defense.

Position in Farmstead Location: Is building located so as to save steps and fuel in going to and from it? ..... If used for stock or poultry, does it receive shelter from windbreaks, other buildings? ..... If used for storage, equipment, does it *give* shelter? ..... Is it so located as to be reasonably safe if it caught fire or the next building to it caught? ..... Is it accessible to feed lots, pastures, scales, poultry runs, range without excessive waste movement? ..... Can it be tied into existing or new sewage-disposal and water-supply systems without excessive carry of pipe ..... into electric system without current loss from long lead-ins ..... and still be so located that prevailing winds will not carry sparks from its heating system or a possible fire directly to neighboring buildings? .....

Can a combination of insulation and firestop (the mineral boards and glass and mineral fibers) be used to advantage? ..... Can you use landscaping, fencing so as to screen its objectionable features from the house yard? ..... And, lastly, do prevailing winds carry its odors away from rather than into the house? ..... **Cost:** Has its cost been figured on a profitable rental or storage basis per bushel or per animal unit or ton or per piece of equipment stored—not at going high prices but at community *average* prices? ..... What, as an example, could you charge a beef cow and her steer calf for their year's housing, and still show a profit year in and year out on your beef-cattle equipment? ..... Is your building adequately insured and insurance cost figured into overhead? ..... **Life Expectancy and Strength:** Do you expect at some future time to change your plan of farming from, say, beef and hogs to dairy; or take on poultry, beef, sheep, as side-line enterprises? ..... If so, is building suitable for conversion? ..... Granting building is not to be changed, do you want it for the short or long haul? ..... In framing and siding of storage buildings is total storage weight allowed for? ..... In stock and poultry buildings is live weight and traffic figured on floors, joists, beams? ..... In feeding sheds or colony houses will masonry floors or feeding wings pay out? ..... In animal-shelter units will increased protection be paid for in rate of gain per pound of feed? ..... What maintenance charges are figured for painting ..... or allowance made for extra cost of material not requiring painting? ..... **Equipment:** Building heated? ..... Building wired for electricity? ..... Feed mills and elevators permanent or movable? ..... Hay tracks, manure tracks? ..... Automatic waterers? ..... Good stanchions? ..... Milkroom equipment? ..... Hospital equipment? ..... Hose outlets or fire extinguishers? ..... Has the ventilation system been planned skillfully per animal or grain-storage unit to give the recommended capacity? ..... Have all stall units been figured to size of animal? ..... Have all windows been figured on a square-foot basis per animal, or upon an ample illumination basis if the area is for equipment or crops storage? .....

So much for planning; you will have worked in dozens of your own specifications as you have gone over this list. With these in mind, the following tested plans and actual remodeling and building experiences of *Successful Farming* readers can better be shaped to your own needs.

The Farm Home

Basic Principles. In remodeling an old house or building a new house on the farm there are three basic requirements that contribute to its convenience, comfort, and appearance and distinguish it from the city home.

These Big Three in farm-home design are: (1) location of the main entrance on the driveway; (2) the farm-home workroom; (3) the central rear hall.

Nine out of 10 existing farm homes face the highway, altho there is seldom any thought given to why they should face that way. Logically, almost every guest comes to the back door because that is the easiest way, and often enough there is not even a walk leading from the driveway around to the front entrance. In building a new house, the location of the house in relation to the drive should be one of the first considerations.

Remodeling a home to conform with the first basic principle may present a serious problem, and is worth considerable thought. It may not be necessary to transfer the front entrance to the side facing the drive to achieve this goal, as shown in the remodeling example on page 12. Steppingstones laid across the lawn from the drive invite the visitor to come in the front door.

It may be that relocation of the driveway or the addition of an attractive walk leading from the driveway to the front door is all that is needed to conform with Principle No. 1. If so, don't have just one drive; add another so that one may be used exclusively for deliveries to the house and the other for the heavy wagons and trucks that are used on the farm.

The second basic principle is the farm-home workroom. It is the one room in the house where all the major jobs of homemaking such as washing, ironing, canning should be done.

The ideal location of this room is on the first floor joining the kitchen and opening out on the service area of the yard. Here it is more accessible for bringing vegetables from the garden and for the men coming with milk from the barn.

As to the arrangement and equipment for this room, first let's consider the water supply. If you have running water, the sink will go on the wall nearest the kitchen, since the same plumbing can serve both. If there is no running water in the home, a pump may be attached to the sink. Near the sink there should be a range for canning, as well as a combination worktable and cabinet with storage space for canning equipment and other utensils.

In the center of the room we would locate the laundry unit—washing machine, tubs, clothes hamper, and ironing board. Lightweight portable double tubs are advocated. These may be moved to any position in the room and adapted to many uses.

If dairy work does not demand a house of its own, you'll want the cream separator and milk equipment in the workroom, placed near the outside entrance. Another unit in this room should be devoted entirely to the men of the family, a corner or alcove where they may hang hats, coats, and place heavy boots. A household tool kit may also be built on the wall, and a cleaning closet conveniently located near the door to the kitchen.

Paramount in the workroom is consideration of a flooring able to stand heavy traffic and steaming water—and still be safe underfoot. Sufficient slope should be allowed to a drain of good size.

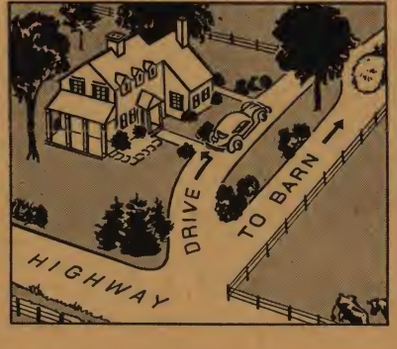
THE third and last of the Big Three is probably the most important because it deals so intimately with every member of the family in everyday living. It is the central rear hall.

Everyone knows that most of the traffic in and out of the home goes thru the rear door, which can mean but one thing: that traffic is directed thru the kitchen. In many homes the kitchen is used as the central rear hall, and for that reason it is likely to be one of the most inconvenient rooms in the home. That is another reason why many kitchens are too large to be efficient places for preparing meals.

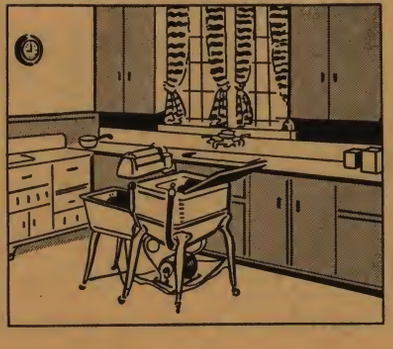
If the kitchen is large, a small area may be partitioned off for the hall, and have stairways and every room on the first floor open into it. An example of how the convenience of such a hall was attained to a remarkable degree is shown in the sketches of room arrangement of the Farmworthy Home on page 9 of this book.

The floor plan directly below gives another alternative; and you will think of many another that fits your own plans. In any event, a fair-sized closet should be provided for near the hall entrance to take care of outer clothing that is apt to be soiled.

1. Entrance on the Drive



2. The Workroom



3. The Central Rear Hall

Livability Special is a lot of farm home for the money. Note the convenient arrangement of the working quarters and the roomy living center. See the offer of the Bildcost List of Materials for this and other homes at the bottom of page

Six Roomfuls of Real Home

YOUR farm family—every farm family—needs room. That's been just the problem in adapting modern, low-cost, city-home designs to farm conditions; the houses had compact convenience but they didn't have the room arrangements needed on the farm. This Livability Special has!

Built in central Missouri for about $3,000 (1940), it is weather-tight, insulated, and equipped with a circulating heating system.

The floor plan is a far cry from the old-type farm homes. The arrangement protects the kitchen and living quarters from ordinary in-and-out traffic with two barriers and one detour. First barrier is the back porch, which holds its share of equipment and muddy miscellany. Barrier 2 is a water and steam-resistant workroom which can be closeted and hooked for outdoor clothing and will house the wash and bulk canning units. The detour is provided by the south wall of the workroom; and notice that in addition to preventing the boisterous from charging into the living-room, the wall carrries along to the bathroom entrance. The hallway will handle much of the rear-entrance traffic, relieving the busy kitchen.

To the front we find the ideal combination of an entrance from the south and from the drive to the east—as contrasted to the old-fashioned arrangement of having a front entrance so out of traffic that it was used only for weddings and funerals.

A small front entry with an ample closet takes care of the bugaboo of a door which tumbles guests right into the laps of the family circle. The living center proper (living-room-dinette) is roomy, well lighted, and serviceable. The living-dining area will house the circulating-air heating unit placed close to the flue to avoid carry of pipe. A small louver goes in over each door, facilitating the movement of air.

The building is insulated thruout: tarred construction paper in side walls and batt-type insulation material between studding and ceiling joists. Over the studding and joists on inside walls go ½-inch insulation board and composition tile board used as interior wall and ceiling finishes.

The flooring is of a concrete containing iron oxide to give it a slightly reddish cast. It caps a concrete foundation extending 2 feet below grade and a foot above, carrying a termite shield to protect the wood. Thus no air leakage thru floors!

The workroom is furnished with built-in tubs to handle good-sized family washings or for cleaning milk cans or other equipment. The concrete floor is sloped to a drain. The closet houses the hot-water tank; hooked to a small water-heating stove in the southeast corner.

Ample storage space is provided. Note the well-located linen closet in the hall area, placed so that bed-making can be done without traipsing all thru the house for supplies. The kitchen has built-in cabinets and drawers. A broom and cleaning closet stands near the door to the dinette. The attic is floored to provide additional storage space.

The lighting fixtures are low cost, providing light in every room and closet, and there are abundant wall outlets.

The engineering department of the University of Missouri designed this home for the caretaker and his family at the University's Swine Farm. We'll all have to admit that here is a lot of farm home for the money and an attractive exterior, too!

This is one of a series of 9 Bildcost Homes, an additional list of which will be found on page 10. We've prepared a list of all materials of Livability Special S1101 (the home on this page) from which you can figure exact cost in your own community by adding labor to the listed totals. The List of Materials, which is only one part of Successful Farming's Bildcost Service, may be obtained for 10 cents. If you decide to build, we'll send you the necessary plans, specifications, and contract forms for the nominal price of $5 for one set, $2.50 for additional sets. Please study the Bildcosts on pages 9 and 10.

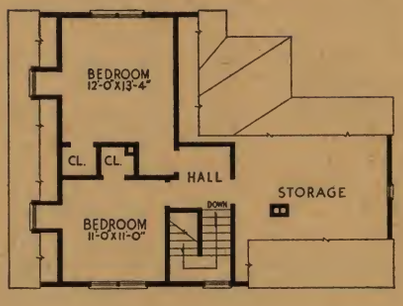
We Call This Home

Farmworthy

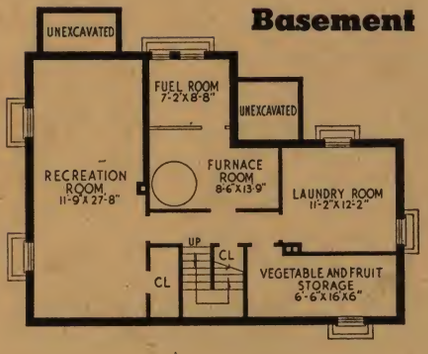
Bildcost House S7-4

First Floor

Second Floor



Basement



HERE is a home that is planned to be built with the least possible cost, yet has all the spacious charm, the comforts, and the conveniences demanded by modern successful farm living standards. A glance at the floor plans will show you how every square foot of space has been carefully planned to give you full value for your building dollar.

It will cost from $3,900 to $6,500 to build this house, the amount varying with the number of modern conveniences added and the difference in cost of building materials in various communities.

Note that both entrances are protected from the weather, and also that the front entrance is so located that guests will be inclined to come to the front door from a side drive. If they came to the back door you could still direct them into the living-room, if you wished.

The bathroom is accessible to every room, including the two second-floor bedrooms.

A home without a storeroom is like a family without a history. Surely every modern family possesses keepsakes of one kind or another, and we are sure that an attic on a rainy afternoon has provided many of us with pleasant memories. There are whole armies of mothers who have been grateful that there was an attic in which the youngsters could amuse themselves when the weather was bad. The attic shown does not have a very high ceiling, but it can have usable floor space of approximately 11 by 16 feet.

The playroom in the basement is intended to be finished in concrete walls and flooring, with plaster or insulating fiberboard on the ceiling. The fiberboard is a real fire protection. It keeps a small blaze from getting directly to the timbers in the floor construction and getting out of control.

● A complete list of the materials needed to build this house can be obtained for 10 cents. Address Successful Farming, 9337 Meredith Bldg., Des Moines, Iowa. Ask for Bildcost List No. S7-4. This is one of 9 Bildcost Homes on which Lists of Materials are available.

For Builders on a Shoestring

THIS is a house with a reason. For the past few years we've all been reading about the low-cost housing units being put up in record time and very inexpensively by various commercial and Governmental agencies. Low cost has become a catch-word, worshipped blindly by some and more wisely by others.

And that's the reason for S1111 (29′ 6″ by 32′ 2″ over-all)—to worship wisely, to present the essentials of low-cost design, to trim off unnecessary gadgets, and yet to come out with a home that will satisfy the farmer's age-old craving for strength, durability, and hominess.

Right off the bat someone's going to pitch into us for that bay window, the iron handrails, and the shutters. Yes, they can be dropped, and you'll save $50 to $100; if trim you must, here's the place to do it. For the interior is down to comfort essentials already.

Entrance may be had from the road thru a solid-panel door and styled Colonial casing that says a well-bred "Welcome," yet isn't snooty as to price; or from the drive and service area thru a hooded entrance into the cement-floored workroom —where there can later be added a wash-up sink, perhaps a shower.

Let's go in this way: First we see that the workroom can serve as a fourth bedroom in a pinch, altho the traffic routing is against it. Here will stand the circulating heater and fuel bin; there's no basement in this low-cost setup. Or you may free the entire workroom by installing a so-called floor furnace in the hall, an oil-burning unit suspended under a floor grill in an insulation pit, taking fuel from a small outside tank. The bathroom, stairs to the second floor, downstairs bedroom, and living-room can all be reached from the workroom— no shrieking kids and gal-lumphing men to bother Ma when she's at ticklish work with a cake.

The kitchen itself is designed to carry the stove next to the workroom flue, with handy work surfaces across from it. A dinette set may be used under the double windows or a full dining-room ensemble in the division between kitchen and living-dining-room. An exhaust fan will keep the odors well under control, or a partition can be strung between the two rooms, if you prefer. A note of warning: Such a partition would tend to make the living-room space look "boxy," cut off light from the double windows in the kitchen. One answer is careful selection of dinette and kitchen furnishings that "unit-ize" and blend easily into the living-room color scheme as well.

The "sewing room" at the head of the stairs to the second story might just as easily be an office for Dad, with a big closet in which to store his records, files, and whatever hobby material he enjoys.

Either bedroom has ample closet space. We suggest the smaller one for daughter or a smaller son, perhaps, because of the way the chimney column has been flanked with quarter-round shelves which make ideal storage and display surfaces for knick-knacks, ivy pots, brassware, pottery, or toys.

As the List of Materials suggests, insulation will be necessary to seal the roof because the sewing-room-office and the bedrooms will get more year-around use than would similar rooms in larger, more rambling farmhouses where there is a choice of exposures. Coolness in summer and warmth in winter are "musts" here.

The Remodeled Farm Home

You Needn't Inherit a Fortune—

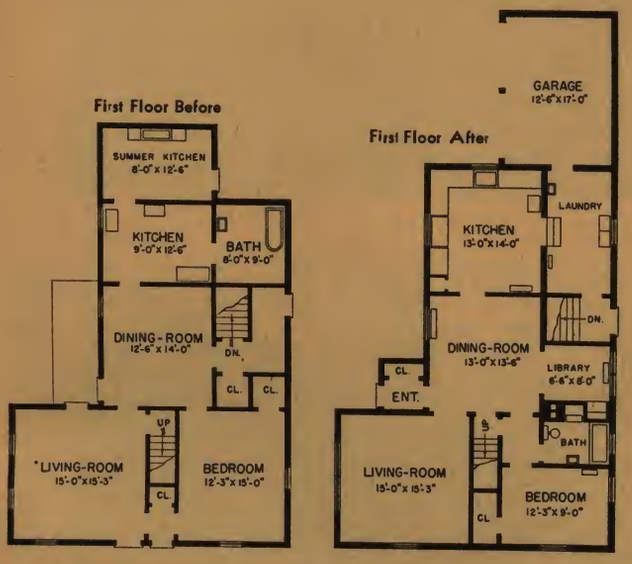
YOU don't have to inherit a fortune to have the kind of a home you want, if the experience of the H. D. Suter family, of Pandora, Ohio, is a criterion of what can be accomplished on a limited budget.

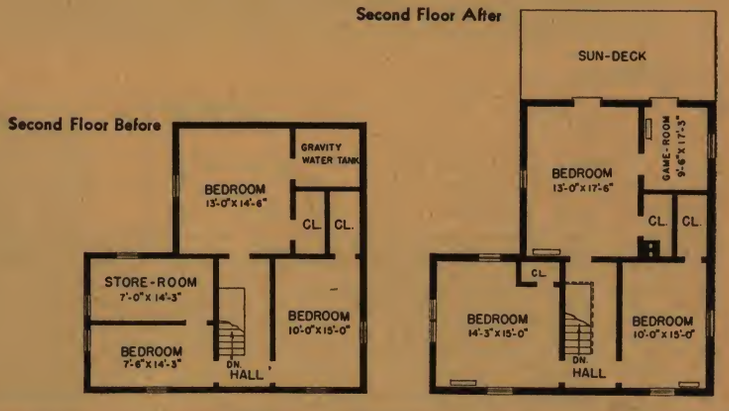
The Suters and their five children have the modern farm home pictured below to show for their efforts, and enjoy the conveniences of modern plumbing, central heating, and well-arranged rooms.

Let's look at the second floor. A partition that separated two small rooms was removed, making a large front bedroom. The guest bedroom, hallway, and third bedroom are unchanged, but an enlarged playroom has been added, and adjoining it is a new sun deck. Mrs. Suter finds the sun deck a grand place for airing clothes.

The first floor is completely changed. The front door opens on a small entranceway which has a built-in closet. The stairs to the second floor separate the living-room from what was formerly one large bedroom, but which was divided to allow space for the bath and the small hallway from the dining-room.

The greatest change was in the kitchen—the "ugly duckling" room of the house. A summer kitchen or annex was taken off and the equipment in the kitchen laid out in the approved L-shaped manner. A new deep well with electric water system brings water for the kitchen sink and the bathroom, as well as for the laundry room adjoining the kitchen. The laundry, which also serves as a wash-up spot for the men, opens to the basement stairway on one end and to the modern, two-car-garage addition on the other.





The Suters "raised the roof" on the rear rooms, put on a two-car garage, stripped porches, painted well

Long Acres—a Triumph in Remodeling

After

Before →

A glance at the before- and after-remodeling photographs and the sketch of the floor plan shows how effective the simple structural changes were. One new exterior wall was added to provide for the living-room. The living- and dining-rooms, 15 by 31, appear as one long room; there is no ceiling separation and only small side partitions with pilaster ends. Entrance is made from the front porch to a vestibule which has a roomy closet. The arrangement of rooms is especially good, it being possible to enter the dining-room from a back porch without passing thru the kitchen or other rooms

TO REMODEL or to build new? This problem, which many a farm family faces today, was effectively solved by the W. W. Knapps of Eaton County, Michigan, when they decided to remodel, and an old but sturdy house on a farm adjoining theirs was transformed into the attractive, convenient home pictured on these pages.

The three essentials of a farm home —entrance on the drive, a utility room, and a central rear hall—were attained to a remarkable degree with very few structural changes. Entrance is thru the side porch directly into the combined dining- and living-room as well as by means of the cross walk in front. There is a utility room but, altho there is no central rear hall, the arrangement of the kitchen and the location of the stairs, utility room, and office makes it possible to reach easily any part of the house.

The framework was in excellent condition and only one exterior side was added—the front of the living-room. New basement walls and excavation for more space for storage, plus a stoker-equipped air-conditioning

plant, were among the major improvements. A water-softener and heater were installed. To provide for smaller quarters when alone, there are complete living quarters with bedroom and bath downstairs; with 2 bedrooms, a toilet, and lavatory upstairs.

The living- and dining-rooms, 15 by 31, are so planned that they seem like one long room. The downstairs bedroom has the original random-width board floor, some maple and some pine. This was sanded and finished with light-brown stain and waxed.

The old pantry was converted into an office. After removing the old shelves and cupboards the room was 6 by 9½. A desk was built across one end under the window. The top is a ¾-inch-thick plywood shelf, 24 inches wide, with three drawers built under the left side. There are three built-in shelves, curved on the edge, each side of the window for books.

Off the office in a hall leading to bath and inside cellar stairs also is a good-sized closet for work clothes, shoes, and hats. It is most convenient to hang up the old clothes and take a shower without going thru the other rooms.

THE kitchen is very handy, with plenty of hot soft water, electric range, and refrigerator. Off the kitchen is the utility room. From the kitchen on the drive side is a large porch. This is screened in summer and glassed in winter. The screens and sash are so designed that they may be quickly changed. The principle of the fixture on screen and glass is the same as that on the combination doors on the market. From this porch you may enter the dining-living-room, so if a guest stops at this porch he does not have to go thru the kitchen.

The stair steps are light, varnished oak. The hall walls are painted light pea-green; the ceiling cream with silver stars. The hall is narrow and on the light-oak floor Mrs. Knapp uses 2 black hooked rugs with pink flowers. The white, ruffled curtains are held back with black plaques decorated with pink flowers. Both upstairs bedrooms have light waxed-oak floors. Off the toilet and lavatory is a large linen closet with deep, wide shelves and drawers.

Another unusual feature thruout the house: the baseboards are flush with the walls, leaving no dust-catching tops, and the window sills are left without projecting aprons. This had to be left this way as the sheathing (because of old construction) was on the inside. However, it is surprisingly acceptable.

"We have built for a permanent home, using good materials," writes Mrs. Knapp. "The pipes, flashings, gutters are copper. From the cut stone on the chimney and the front of the house we had enough left for our Dutch oven.

"Many people ask if we would remodel again or build all new. I'm sure, under the circumstances, we would remodel. We have larger rooms and handy features which we could not get for the same money in a new house. Of course, we spent a great deal of thought and time on plans, and for years I have read and re-read farm and home-decorating magazines. All this had been with the thought that some day we would build."

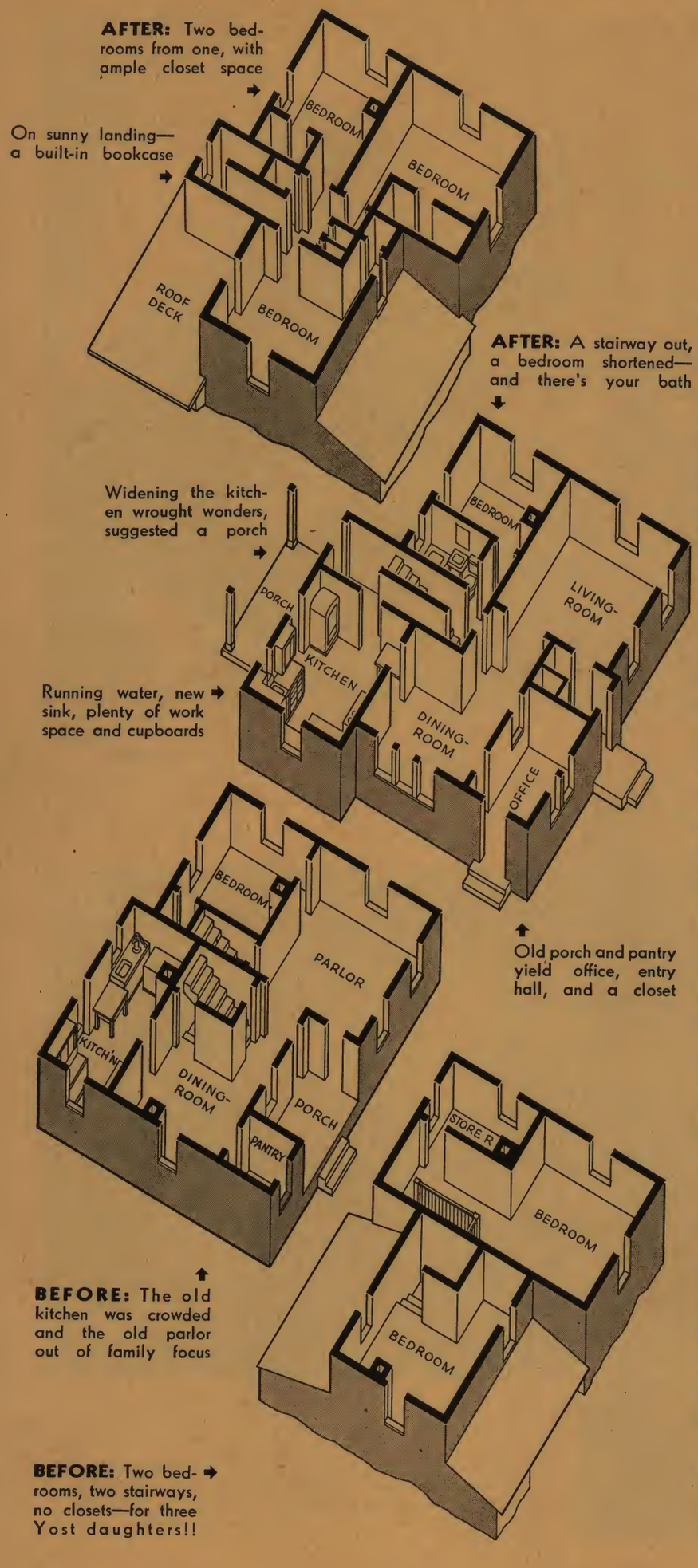
The old pantry was converted into an office with the desk built across one end; the top is of plywood; there are 3 lower drawers and 3 shelves above at each side. Mr. Knapp found the privacy and orderliness of an office speeded his business farming; Mrs. Knapp liked it too

This view is from the living-room ➡ into the dining-room. The small side partitions gave the effect of division yet were not difficult to tie into the general layout as are many arches. The new fireplace lies just to the right of the big easy chair, has been a favorite gathering spot for family conversation and fun. Ample light is furnished by the large bay window

⬅ This living-room view gives us the bay-window detail and an idea of the spaciousness of the room. The window at left is the one set in the stone facing shown on page 12

A Plain Old Home

Little difference outside (except for paint), but look at those floor plans



THE John Yosts of Downs, Kansas, have provided us with a fitting example of what can be done in transforming a plain old farmhouse into a home filled with the comforts and conveniences of modern living.

The house wasn't fancy outside, and still isn't! The Yosts decided to make the house really livable inside first. The family beside Mr. and Mrs. Yost consisted of the three girls, who had to pile into the two upstairs bedrooms with annoying separate stairways leading into each.

Mr. Yost wanted an office-den; Mrs. Yost insisted upon a warm, modern bathroom and a cookery artist's kitchen; and the girls wanted their upstairs rooms given closet space and another window. A visit to Kansas State College yielded a workable set of remodeling plans—including the location of a central stairway, a problem that had worn many a Yost pencil to the stub.

When cold Kansas winds were still blowing in March, the Yosts began work by digging a basement room (13 by 21 feet) next to the old storage cellar. After Mr. Yost cemented the basement floor, the gang moved upstairs and tackled the kitchen.

The equipment was moved to the old wash house and the former kitchen was torn away; new foundations were put in for the new kitchen and hall, a hall that was to do away with the previous cross traffic thru the kitchen and provide a wash-up spot for hands too grimy for the spic-and-span bathroom.

Upstairs partitions came out and new ones went in, with allowance made for a single stairway and a clever bookcase on the landing. A third bedroom was created by one partition, and every bedroom was given a closet.

The wainscoting was torn from the dining-room and "parlor" that was to become the real living-room. Later this material was used for porch and closet linings, because the Yosts make every nickel count. Three windows went in on the dining-room south wall (in place of the former single one) which introduced a flood of sunlight for winter and a cooling element for summer.

Dad's office-den was next, a rebirth of the old porch and pantry made wider, given an entrance all its own and two windows for plenty of desk light.

Mrs. Yost kept a proud weather eye on the progress in the kitchen, transformed from a rangy, dark, step-coster to a light, bright, "horseshoe" step-saver where the only misfortune is that the icebox is still out of the center of things. Kitchen and central rear hall open onto a breezy, roomy screened porch, seven by 14 feet, where the homemaker can sit and rock a bit, shell peas, and keep one eye on the barnyard and the other on the stove.

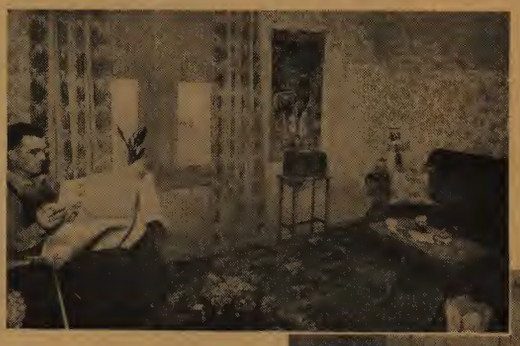
How long did the job take? Just five months.

What did it cost? An accounting from John Yost's books shows, in round numbers, $1,000, including labor hired off the place. And just a glance at the plans shows they solved many of the problems that are present in older farm homes.

How to Share a House With the Hired Man

It can be done Accola's way, without friction and with a guarantee of field and farmstead help when you need it

Photographs by Gordon



Jack Chambers relaxes in the comfortable living-room of the apartment Employer Fred Accola built in his home

Mrs. Chambers, a good cook, has a good kitchen. The floor plan of their second-story apartment is shown upper right. Dotted lines outline the room which the Accolas have "reserved"

WITH the farm labor problem such as it has been the past year, more attention has been focused on better living conditions for the hired man. On many places without a tenant house this brings up the problem of sharing the home.

In Polk County, Iowa, Fred Accola had a big house, a big farm, and needed quarters for hired man Jack Chambers and bride. He solved the problem by building an outside stairway to the upper rooms and making a modern apartment for them. Everyone is satisfied with the arrangement.

In building the apartment, the Accolas did not give up the entire upstairs. One room opening off from the existing stairway was reserved. The remaining three rooms were typical bedrooms built in farm homes 30 years ago—some with sloping ceilings at the eaves. It was from such a room as this that the apartment kitchen was remodeled. It's ceiling sloped, but this presented little handicap. Shelves were hung right on the slope in half-A fashion. The cupboards below were brought out to where their doors flushed with the upper cupboard doors. The end of the cupboard was rounded in modern fashion.

A sink was installed with running hot and cold water, and a gas stove and electricity added to the conveniences. The kitchen wall was cut for a door, and a private outside stairway put in. Bathroom fixtures will be be installed later.

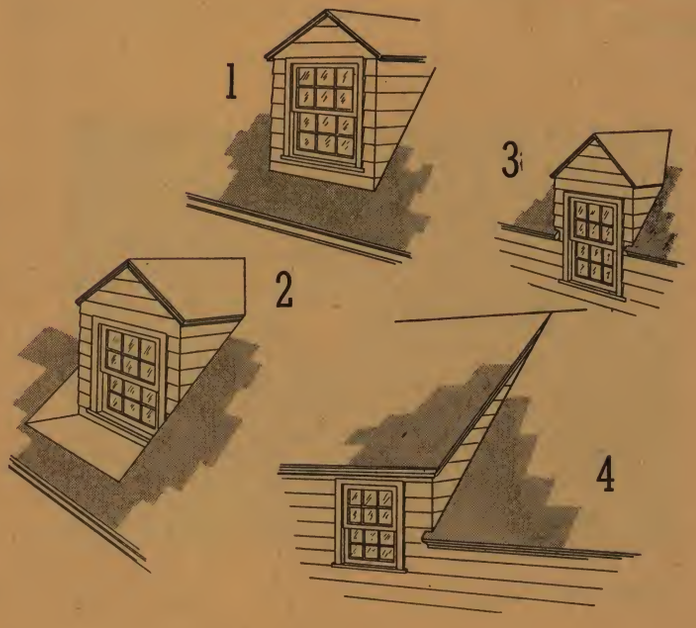
Off the kitchen is a small hallway, from which doors lead into the bedroom and the living-room. The apartment is light and cheery with figured white kitchen wallpaper, light new woodwork, pretty curtains and draperies, and plenty of sunlight from the windows, which by the way enable Mrs. Chambers to keep an eye on the fields and farmyards thruout the day.

Dormers Mean More Rooms

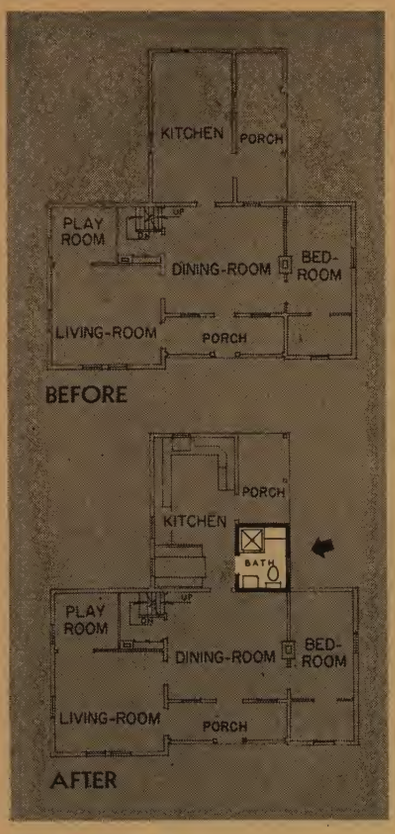
WHAT good is your second floor? Is it divided into cheery, well-lighted rooms, or are the second-floor rooms just stuffy cubicles depending on light from the end wall windows? There is a solution to the problem arising from the latter type of structure. The solution is dormer windows.

Our first example is the short dormer that might be used to light or ventilate an attic. The No. 2 type is often used when the wall of the room is a long way from the window, especially if the dormer is set on top the roof. This type requires a deck, which must be put together properly to prevent leakage. Our No. 3 type is designed to give proper height to short windows. No. 4 is often used when more space is needed on the second floor for another room or a bath.

When you build a dormer, try to make it as small as you can. Get the window just as big as you feel is necessary. Big dormers look clumsy. Make them look as tho they were a part of the house, real architectural units.



Proved Details instruction and plan sheets for building dormer windows may be obtained for 10 cents from Successful Farming's Building Editor, 9337 Meredith Building, Des Moines. Specify which type dormer you want by number when ordering plans.



PLAN NO. 1

There's Always Room for a Bathroom

IF YOU are one who has "always wanted a bathroom but be darned if I see how I can get it into *this* old house," the how is right on this page. The house plans you see here were selected as typical from some 600 sets made of actual farmhouses, old and unimproved, modernized for comfort and convenience.

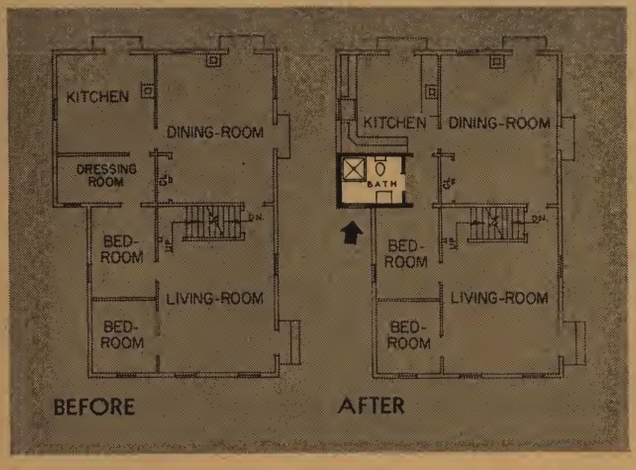
In Plan Number 1 there wasn't much chance to locate a bathroom within the present wall. So we hit upon a corner of the old porch which means, of course, new walls, a new floor, and another kitchen door. But that kitchen needs re-arrangement anyway!

In Plan Number 2 the arrangement is very inexpensive and the bathroom *does* have access from one bedroom and the rear part of the house. Compact, the room contains shower, stool, lavatory.

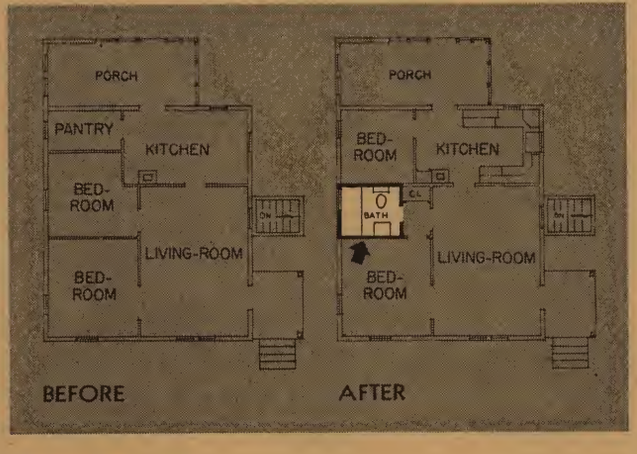
In Arrangement 3 we have a much more handy setup. The north bedroom has been cut down slightly, and the bath put between the two bedrooms. Ideally there should be access from both rooms to the bathroom hall, and this could be accomplished by cutting the kitchen down slightly. It was not done here because of cost.

Plan Number 4 adds only one full wall and provides both a washroom off the kitchen and a bath in the main body of the house. Surely the bathroom is much more practical than that oversized bedroom! Notice, too, that the suggested rearrangement gives this home what amounts to a central rear hall.

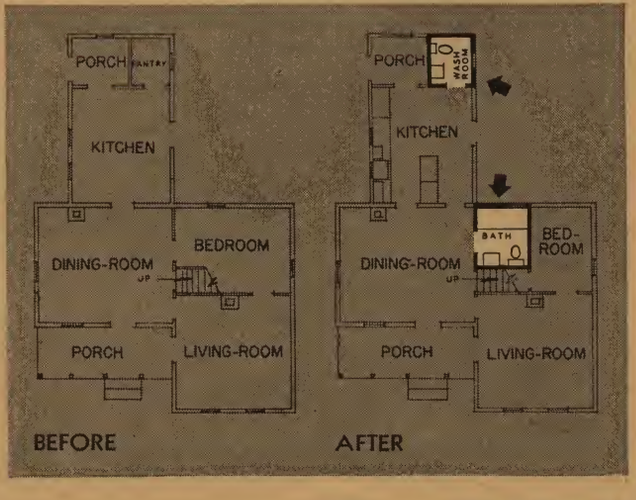
In all cases we have tried to place the bath in a spot accessible to two or more rooms and, with the exception of bathroom boxed from an old porch, have found it easy to do with a minimum of structural changes.



PLAN NO. 2



PLAN NO. 3



PLAN NO. 4

Storage Space to Spare

FOR a new approach to the gift-for-Mother situation and an escape from the frilly paper-and-lace tradition, why not bring your present down to earth this year? Give something practical—a closet. You have some? Fine, but never was the house built that had enough work-clothes storage space.

Bedroom closets, linen closets, broom closets, and work-clothes closets—the sketch below will suggest how you can build in a half dozen of them. But let's concentrate on work-clothes storage space; the need for it is super certain. Mother would appreciate the opportunity to store rough clothing where it wouldn't drip water on the floor and bring barnyard odors into the family's living rooms. What is more, wouldn't *you* like to throw in icy overshoes and hang up the wet sheepskins where you could just let them drip on the floor and where they'd be dry and warm in the morning?

This compact, odorless work-clothes closet has air vents and floor drain for quick drying

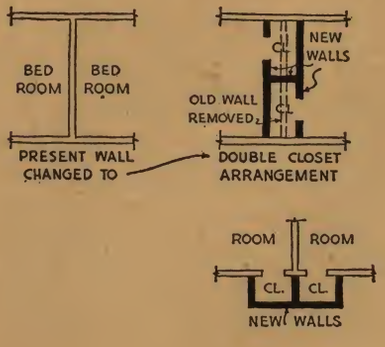
Construction is simple: The walls in the sketch at lower left were planned for cement plaster or waterproof hardboard. The floor is concrete or metal and has a slope to the drain. Then, in the ceiling or high on a wall, there should be a 4-inch metal pipe that leads outside—either thru the attic or thru the exterior wall. This pipe is usually connected to a sloped metal hood that caps the closet. A small grill at the bottom of the tight door allows warm air to enter from the room, circulate thru the closet, and pass thru the vent to the outdoors. The room-temperature draft warms and dries wet garments quickly, carrying off all odor. It works on the gravity system just like the dairy-barn and colony-house ventilation outfits.

The concrete floor slab, or the metal floor, can be put in over the old wood floor of any home. There will never be a volume of water going thru the floor drain anyway, but it will be a real convenience to be able to wash down the floor, walls, and shelves. By the way, these closets usually go in with two shelves, one for hats and one for boots and shoes. Any number of shelves could be inset, of course, but it should be remembered that the essential here is air circulation for drying. Too many shelves make it hard to hang clothes. The lower shelf should be sloped to the front edge slightly so that drip water from footwear and clothes above will not puddle.

It's easy to find space for a closet like this—any convenient corner—and for most other closets, too. The instructions will give you every detail: floor pitch, dimensions, hood rest, concrete curb. And don't forget this: that there's never room in the house for your wet work clothes, but there's always room for a closet.

A Proved Details instruction and plan sheet for building a work-clothes closet may be had by sending 10 cents to Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa—and asking for "Proved Details of the Work-Clothes Closet No.1."

Here are just a few of the ways tidy homemakers can be given abundant closet space



Take a Shower —it's easy to install by following these How-to Plans

THE shower stall shown here is designed to be placed over present or new wood-floor joists by the farmer-carpenter himself.

The tops of the joists are trimmed slightly to the shape shown in the drawing. Concrete forms made of one-inch lumber are placed between the joists. The floor, curb, and base of the receptor should be built and allowed to set and dry before the walls of the shower stall are set up. The inside dimensions of the receptor should be 3 feet by 3 feet, if possible; 2 feet, 6 inches by 3 feet will work, however.

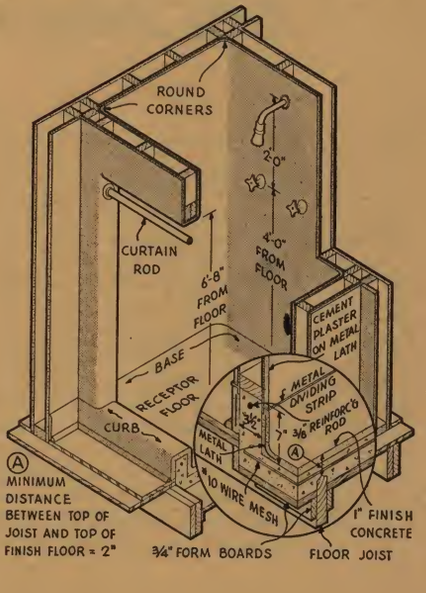
The receptor floor should be reinforced and should be sloped to the center, where a floor drain is set into the concrete floor.

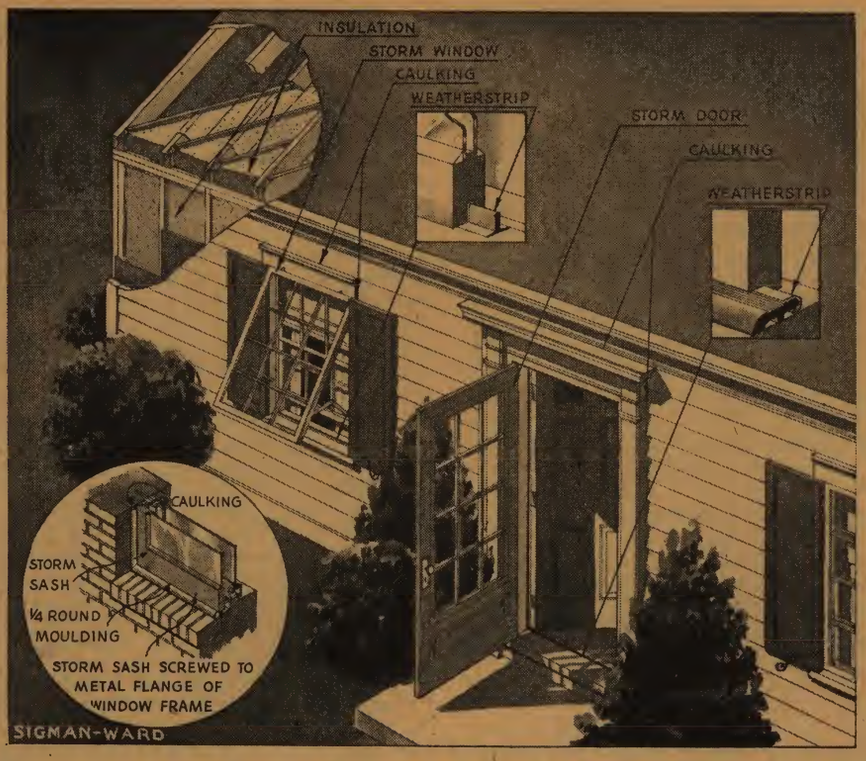
Use a regular shower drain supplied by the dealer making the plumbing hookup. The curb, the base, and the floor should be cast in one solid block. For this concrete use a fairly rich mixture, one part cement to four parts sand, or one part cement to five parts sand. For the finish cement, which will be about three-fourths inch to one inch thick, use one part cement to two parts sand.

The plaster on the inside of the shower stall should be cement plaster and is often made of Portland cement. (Follow manufacturer's directions when applying.) Ordinary gypsum plaster is not recommended.

Remember, too, that you can buy complete metal or glass shower stalls in a wide price range to fit your needs and purse. Have your local dealer give you quotations when you talk to him about your shower.

We've prepared a blueprint sheet of Proved Details and instructions for this shower stall that may be had by sending 10 cents to Successful Farming's Building Editor, 9337 Meredith Building, at Des Moines, Iowa.





Storm-proofing shown here on a farmhouse can as profitably be applied to service buildings

Storm-proofing

THE HOUSE above illustrates ways in which farm buildings, both home and service, may be storm-proofed for winter. Where double glazing (two panes of glass separated by an air space) is used as shown in the first square, storm windows are not necessary, but weatherstrip is. On casement windows (not shown), double glazing is a strict necessity. The round insert shows how metal-framed windows and storm windows combine to storm-proof masonry side walls. Metal framing is also very usable on wood walls.

First step in storm-proofing is to check the house and service buildings to determine if there are excessive air-leakages around door and window frames. Often heat losses here exceed losses around the window sash itself. By removing inside or outside trim, the space between the window frame and the house or barn frame may be packed with insulation.

The second step is to provide a complete set of carefully fitted storm windows and doors. Heat passes thru glass very rapidly, and storm windows may reduce the total window heat loss as much as 50 percent. Fuel savings will actually pay for the windows in from one to three years. The table at the close of this article shows the amount of fuel saving for various steps in weatherproofing.

The third step calls for insulation of ceiling and walls. For the ceiling, a 4-inch fill of insulation or a blanket insulation of corresponding efficiency may result in a fuel saving of 30 percent. When building a new house, it is a simple matter to select the desired amount of insulation and install it at low cost. In an old house, the side walls may be blown full of insulation; or insulation board may be put right over the old wall to provide a fine new surface itself—or for paint, paper, or plaster.

The following table of approximate fuel savings has been taken from *Thermal Insulation of Buildings*, Circular of the United States Bureau of Standards No. 376. (Amounts expressed in percentage of fuel which would have been required for similar house without insulation or weatherstripping.)

	Percent of Saving
No insulation, weatherstripped	15–20
Same, with storm windows	25–30
½-inch insulation, not weatherstripped	20–30
½-inch insulation, weatherstripped	40
½-inch insulation, with storm windows	50
1-inch insulation, not weatherstripped	30–40
1-inch insulation, weatherstripped	50
1-inch insulation, with storm windows	60

Buildings housing livestock and poultry are no exception to the rule regarding heat losses. For instance, any building which is well lighted has large heat losses thru doors and windows; from 25 to 30 percent of the heat losses may be saved by using storm windows and storm doors. By reducing this heat loss, ventilation is improved.

Proved details, blueprints, and instruction sheets for both wood and metal-frame window and storm-window installation may be had for only 10 cents a set by writing Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa. Specify set.

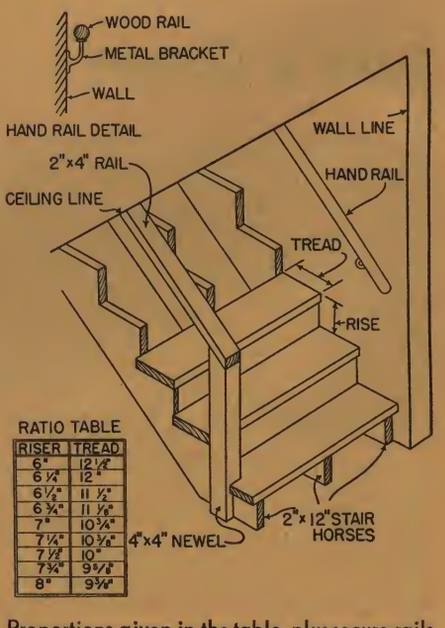
Safe Stairs and Cellarways

WHETHER you are building a new stairway to the second floor or a new set of steps to the basement, the same principles of safety and convenience should be observed.

With modern basements used for a variety of purposes, obviously just any old kind of an entrance won't do. The entrance must be presentable, the steps need to be lighted, and you need a handrail.

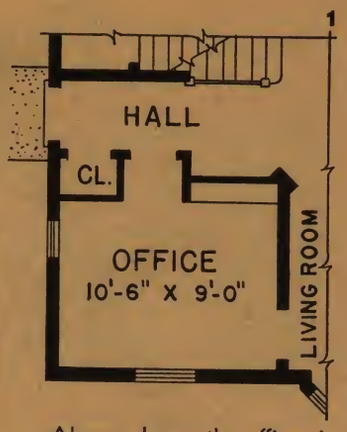
We have to have good, comfortable, sturdy stairs so proportioned that it is easy to go up and down. That means that the proportions between the riser and the tread must be right. The stair can be steep if we have the correct proportions between riser and tread. Ordinarily there are 16 risers (vertical pieces) between floors, and the best stairs are laid out on the formula that the riser and the tread (flat piece) multiplied should not equal less than 72 inches or more than 75 inches. The table is worked out for these formulas. Another good rule of thumb is that the sum of two risers and one tread should equal 25. Also there should be headroom of six and one-half to seven feet.

Next we need plenty of light so that every step can be seen clearly. These lights should be controlled both from the top and bottom of the stairs. If only one light is possible, it should go in at the top of the stairs, guarded by a metal frame. A further safety feature would be to paint the outer edge of the treads and about one inch of the surface back from the edge with white or aluminum paint that is very easily seen.



Proportions given in the table, plus secure rails and lighted passage, make "easy" stairs

Have an Office of Your Own



Above: Lamont's office is roomy and easy to reach

MANY of us have a twinge of conscience several times a month: we must dig out those tax-payment records, we must note down farrowing weights on the new litter. Do we? We do not! Susie took the pencils to school, Mother has cleaned out the table drawer with those record papers in it. (Or maybe Dad had displaced Mother's favorite recipe clippings with a bunch of literature on the sterling features of the Does-All tractor.)

There are just two answers. You can keep on cussing under your breath and go out to the south pasture. Or you can do what Tom LaMont did and build or remodel some desk and file space into your home.

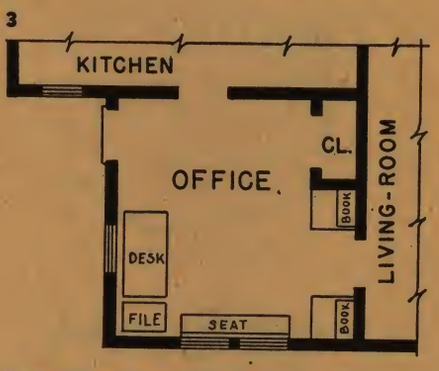
Tom, in partnership with his father, George B. LaMont, operates a large and successful fruit and general-crops farm in western New York. In the new house Tom built for his bride several years ago he put office space cleverly located so that either of the two men can get to the files and desk without tracking thru the house. On the other hand, the space is easily accessible to the living-room.

The office is no show place. It's neat, because it serves as an interviewing place for farm help and a conference room for committees, buyers, and sellers. But there's an unwritten rule that Tom's papers are *not* to be disturbed.

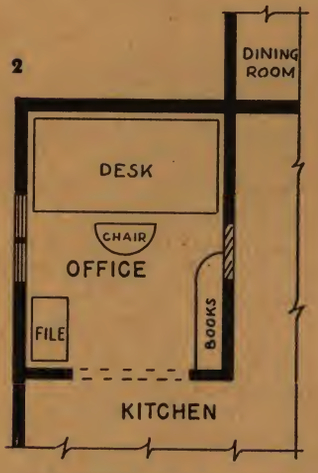
Narrow shelves within arm's reach of the chair hold books and bulletins. Open-edged boxes about the size of a thick book hold flat filings and paper-clipped material, with listing made on the back of each box, which faces out. A deep drawer in the desk contains 12 envelopes labeled with the months of the year. Receipts for gas purchased, weight tickets, invoices, and so on are filed here. Each hired man makes out a daily job ticket indicating where and what was done. Tom files these in a series of binders.

Tom's office layout is shown at upper right. Below it we see how Fred Accola of central Iowa fixed up an old pantry by closing in a door and building a bookcase. His is a tiny place, five by seven feet, but is the best use of the space available. He's using pine-panel wallpaper over the plaster, waxing it against stain and scuffing.

Tom LaMont finds record-keeping is largely a matter of having a place for it. At his left, the famous box filing



This office is an old hallway. Note the storage space in window seat and bookcases



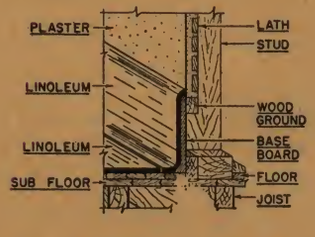
Fred Accola's office, ex-pantry, is a family planning center

Mrs. Accola will have drawer and file spaced reserved for her records and planning—a "planning center" as the city architect would say. The office is on the south side of the dwelling; had it been on the north, Accola would have found one of the new wood-simulating building boards which may be had in knotty pine, walnut, oak, and many other surfaces a better insulation bet.

To the left below the LaMont-Accola setups is another remodeling job done by the Burritts, also of western New York. They took an old hallway off the rear entrance, increased window space, cut down the old closet, and built in a window seat with the capacity of a good-sized trunk for those records and bulletins they didn't want in the files but still found too valuable to throw away. Earl Phillips, another New Yorker, has retreated to the basement with desk, filing case, bookcase, and a couch on which he can stretch out when he feels the need of 40 winks.

Nearly every farm home *has* a place for an office: pantry, hallway, corner of a large room, under the stairs. If possible, it should be given a view of service yard and buildings, but the essential is to have it

How-to-Build-It Details



Above: One drawing from a set of six on a Proved Details Sheet for Laying and Basing Floors. These sheets, which carry complete instructions, are mailed out to you at cost

IN ADDITION to Bildcost Home Lists of Materials and blueprints, and service building lists and prints, Successful Farming is compiling a library of smaller building and remodeling projects for the farm carpenter. A listing of Proved Details now available, and their prices, follows:

Built-In Shower Stall.....10 cents
Wood-Frame Storm Sash and Weatherstrip.....10 "
Metal-Frame Storm Sash and Windows.....10 "
A Streamlined Foot-Scraper.....10 "
Designing and Grading Driveways and Parking Areas.....10 "
Laying and Basing Floors.....10 "
Built-In Drying and Work-clothes Closet.....10 "
Brick and Fieldstone Barbecue Fireplaces.....10 "
Built-On Porches.....10 "
Adding a Bay Window.....10 "

In ordering your Proved Details sheets from this list, please address Building Editor, Successful Farming, 9337 Meredith Building, Des Moines, Iowa.

The Farm-Home Workroom

THE farm-home workroom should be a warm, dry, well-lighted space conveniently arranged and properly equipped to handle the many chores that have no place in the kitchen. The general construction methods and step-saving arrangements have been tested in thousands of farm homes, but *you* must decide as to what work you wish this room to be fitted for.

A flexible workroom arrangement is best—not a setup especially prepared for laundry or canning or dairying. A stove, sink, and adequate cabinet space should be permanently located; let the rest of the equipment be movable. Flat-painted walls, sturdy tables, and floors that can be flushed are other suggestions for a practical room.

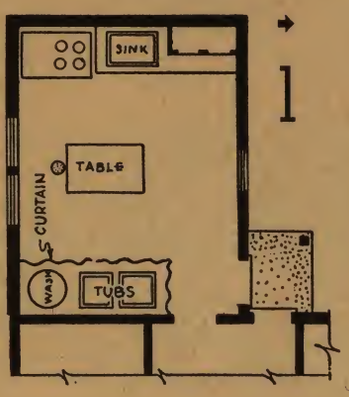
You'll be certain to want running water and a sturdy, deep sink at comfortable height. The workroom is ideal for wash-up-shower, lavatory, or perhaps a complete bathroom. A work-clothes storage cabinet can be a great asset.

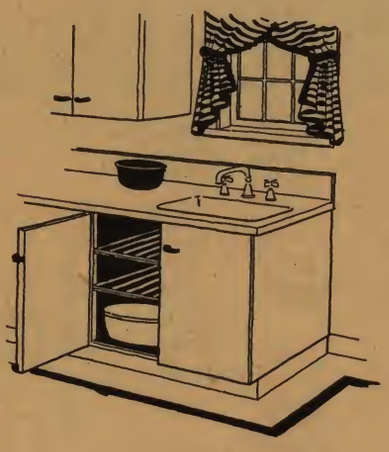
The room shown in Diagram 1 follows an ideal arrangement of a door from the workroom into a central rear hall and another to the outside. It has plenty of light, as all workrooms should, and cross-ventilation to remove steam and odors. Heat of some sort is necessary here—even if not so warm as the rest of the house. We've suggested that tubs and washing machine be kept behind curtains.

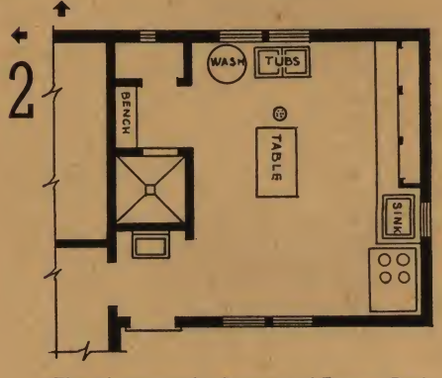
Arrangement 2 has a shower and locker-room space in addition to the well-lighted space for work units. There's a lavatory placed near the outside entrance on the shower-stall wall, a practical arrangement for men coming in from the fields. Placing the doors in one corner leaves all wall space free for other purposes.

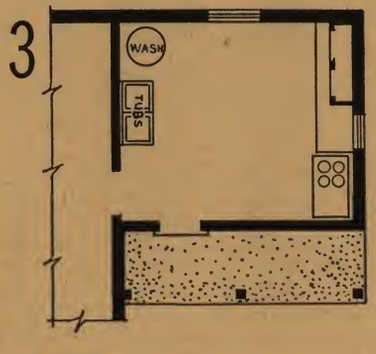
Diagram 3 shows a much smaller plan that would be used mostly for laundry. Here the tubs are fixed to the wall and will have both hot and cold water and a discharge pipe leading to an open floor drain.

These suggested arrangements are subject to various changes. Really the only hard-and-fast "must" is a washable floor sloped to a drain. Install that and you're 50 percent along in having that chore-room fixed in a pleasant, workable way.



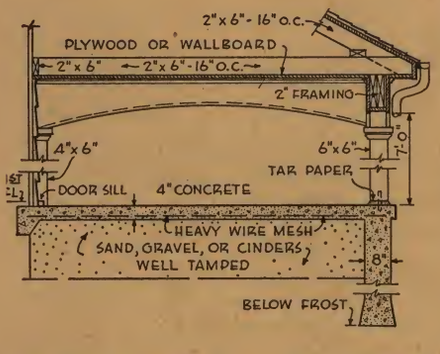






The photograph above is of Farmer Peddicord of Kansas. He included a workroom in the Bildcost house appearing in Successful Farming for April, 1941. All the family use it, he says, and he finds the wash-up spot handy when he comes in

Add a Porch for Livability



Two Proved Details sheets giving blueprint dimensions and instructions for building porches may be had by sending 10 cents to Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa.

THE addition of a porch to your home, or the replacing of an unsightly or inconvenient porch arrangement, may be just the "touch" needed for improved appearance and livability.

First step is a study of the house to determine where the addition can be made, keeping in mind the fact that your climate is a factor and that you also must not deprive important rooms of too much sunlight.

Nine to 10 feet for width and 12 to 14 feet for length give a modest porch that will serve very well. Ceiling height is usually a little less than that of the first floor.

If a concrete floor is to be built, a portion of the old masonry wall and some of the joist framing may have to be cut away to support the concrete, as shown in the drawing from the Proved Details sheet. Allowance should be made for the amount that old walls may be out of plumb.

For an enclosed porch, the floor can be level, but an open one should have the slab pitched ⅛ inch per foot of width. Pads of cement 1 inch high should be built up to receive posts. Before the concrete has set, insert half the length of a 4- to 6-inch brass dowel or pipe in the center of each pad.

Altho concrete is recommended for an open porch, wood is very satisfactory. Framing is the ordinary joist construction, size depending on the span—a wide floor requiring 2-by-8 or 2-by-10 joists. Masonry piers about 12 inches square at the corners and under each post are satisfactory as supports.

The modern tendency is to use simple, square posts without any embellishment.

For More Livable Homes

Easy-to-follow ideas for decorating and furnishing your home—from attic to basement—economically and attractively

THE first room we want to talk about is the kitchen, because it is usually here that most of the homemaking tasks are centered. If the kitchen is conveniently arranged and surroundings are bright and cheerful, our work is quickly done and we have time to consider the other rooms—leisure in which to create the homey atmosphere that means so much to the enjoyment and well-being of the family.

Arrangement

What does your kitchen need? What are the first improvements you should make? The best way to start improving your kitchen is to sit down with pencil and paper and make a rough sketch of the floor plan and list all your equipment; then check a few questions like these:

Are the large pieces of equipment efficiently arranged? Do you have to take needless steps in the preparation of the simplest meals because your range is too far from your worktable or cabinet?

Are the floors so badly worn that they need scrubbing every day to be kept clean?

Do you have enough storage space in the kitchen for those things you use every day, or do they have to be stored in the cellar or basement?

Is the pantry really convenient, or is it robbing the kitchen of much-needed light?

There are scores of additional questions that will have to be answered and that's where your kitchen-planning begins. You'll have to make your own rules, for there are no arbitrary rules that can be followed successfully in every kitchen. Each kitchen has to be planned individually according to the size of the family and the work that takes place in the home.

Work Centers

When you consider the work to be done in the kitchen, you see at once that the room naturally divides itself into three centers—refrigerator, sink, and range. The refrigerator should be near the rear entry, where food preparation usually begins, the sink next in line, possibly in the center of the work counter, with the range near the dining-room door. Plan for plenty of cupboard space, conveniently placed and arranged.

If possible include in your kitchen a place for family breakfasts and snacks. Perhaps that old pantry or that spot under the south windows could be converted into a handy eating nook.

Keep your kitchen young, and it will help to keep you young! Turn your kitchen into a sunny affair with gay curtains and pretty plants—a sure cure for furrows in the brow. Don't hesitate to make structural changes involving the windows. They're far less expensive than one expects. A new and spacious window instead of a tiny one will give you a new outlook on life—and on your yard, too, or the road, wherever your house faces.

In installing or changing a window, keep the sill on the inside the same distance from the floor as your table tops and other equipment. It's much easier to arrange equipment when there is no low or too-high sill.

Walls

Give a tint to the walls which reflects light from the window and brings a glow

Here's the pan cupboard. The shelves were built to fit Mrs. Page's utensils, and every pot and saucepan has it own place. This use of higher cupboards instead of base ones for the pots and pans eliminates stooping ⬇

⬆ Lids, cooky sheets, trays, pie pans find themselves in orderly array in the vertical file. This part of the cupboard is built of plywood, and slides out. Part of it, a slide-out drawer, is used for towels

More than 300 people have come to see this room. It's hard to realize that this sparkling new kitchen was once the unhandy room pictured in the floor plan on the opposite page. Six months of planning by Mr. and Mrs. Page followed by the actual remodeling, a large part of which was done by the Pages themselves, brought about the transformation. Mrs. Page is pictured above in the kitchen of their home in Wisconsin

to the complexion! Paint, enamel, and other finishes are inexpensive, and someone in the family is usually able to do the work.

If your walls are worn, and need renewing, consider finishing them with a specially processed wall-covering which comes in large rigid panels measuring 4 by 8 feet. Each panel is divided into tile-like units 4 by 4 inches. No paint or enamel is needed to finish it. Installation is almost as simple as the laying of new linoleum; it can be laid right on top of plaster. It is waterproofed to resist moisture penetration and may be easily cleaned with soap and warm water.

With the many charming wallpaper designs, oilcloth, and paint combinations now accessible to all homemakers, kitchen walls should step out of the background into the foreground of our treatments. Don't be afraid to experiment because, unlike floors, kitchen walls may be done every season or two. So dare to be daring in your treatment of them.

Woodwork and Floors

Think of the woodwork as a part of the wall because often a large portion of wall space is occupied by cupboards and windows. Consequently, whatever the woodwork, it must be in harmony with the walls to achieve a pleasing effect.

All the new equipment you need, conveniently arranged, cannot make your kitchen attractive if the floor is old and worn, for nothing affects the appearance of a room quite so much as the condition of the floor.

Linoleum is the most practical and most popular floor-covering for the kitchen. Tremendously popular is the "broadloom-type" of all-over inlaid linoleum; the factory-applied adhesive back permits it to be laid directly over wood floors.

Costing less than the linoleum, but lacking its wearing qualities, is the felt-base rug, obtainable today in a wide variety of colorful patterns that will brighten the dullest kitchen. Not only does it come in all the popular room-sizes but it can be bought by the yard to cover the entire floor. Cork and rubber tiles are used a great deal. The cork tile is unresisting and soft underfoot. Rubber and linoleum tiles give splendid wear; the former comes in the smartest of marbleized effects and makes an attractive floor-covering.

For refinishing floors there are available today excellent types of transparent quick-drying enamels. Choose a floor paint waterproof, tough, and durable. Bare floors can be finished by oiling.

Windows

The first requirement of kitchen windows is that they furnish plenty of light, so do not over-curtain them. If the kitchen is quite light, gay print or plaid cottons may be used most effectively. Don't overlook oiled silk—or cleverly cutout oilcloth curtains. Gay kitchen toweling, too, makes a serviceable window treatment. If you're fond of plants, arrange them in hanging pots on each side of the window and on the sill to replace curtains.

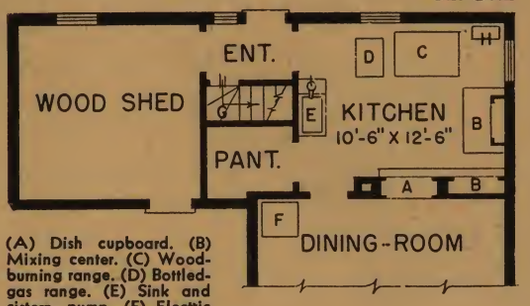
Lighting

Good lighting is one of the first requirements for a successful kitchen. If possible, plan to have a light at every work center—the sink, range, and refrigerator. One light, well placed to eliminate glare and provide ample light, can usually be made to serve two centers.

The best lighting for a kitchen is a diffused light or one which is as nearly like daylight as possible. Working counters may be properly lighted by bulbs concealed

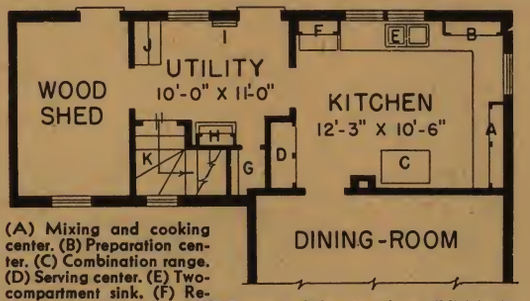
Seldom does one find dish cupboards so well planned. Small half shelves have been built close together for platters, cups, teapots, and the like. Shelves are adjustable

BEFORE



(A) Dish cupboard. (B) Mixing center. (C) Wood-burning range. (D) Bottled-gas range. (E) Sink and cistern pump. (F) Electric refrigerator. (H) Radiator

AFTER



(A) Mixing and cooking center. (B) Preparation center. (C) Combination range. (D) Serving center. (E) Two-compartment sink. (F) Refrigerator, cabinet above. (G) Broom and cleaning closet. (H) Men's wash sink, cabinet above. (I) Hinged table. (J) Hinged seat, work-clothes hooks, and shelf. (K) Stairway, leading to the basement

back under the cabinets which are above them. For homes unequipped with electricity, the new kerosene-burning and gasoline-pressure lamps are very successful. Attractively styled, non-leaking, they are built to give light where you need it. They, too, should be properly shaded, and so placed with reflectors that the light will fall on the work surface rather than in the worker's eyes.

Too much glare is likely to be just as responsible for fatigue and eyestrain in kitchen work as too little light. When the sink is placed before a window, one should consider whether or not the glare of sun on snow or water or a sunny field is going to cause eyestrain. Altho this is often the situation, most women wish to wash dishes with their eyes on the view or on the children at play; then an awning, Venetian blinds, curtains, or the protection of a porch will help to reduce the glare.

If you're wiring your home, plan to have enough electrical outlets in your kitchen to take care of all the electrical equipment which you have or plan to have in the future.

Color

Too often kitchens are just workshops, dull and drab, where none but the family is allowed to enter. Your kitchen is the one room in your home in which you spend most of your time; it is common sense that it should be a gay, attractive room—a room which you should be proud to show your friends, where it is a pleasure to work, where work seems to get done more swiftly with a minimum of effort.

Its color harmonies need not be the quiet restful combinations used in our living- and sleeping-rooms. Kitchen colors may be as gay and as stimulating as our hearts desire. Here medleys of color may run rampant thru our cupboards, over floors, walls, and windows. Our only rule is that the colors must harmonize.

We must begin with the floor and walls. A few simple rules: Because the floor suggests support it should be darkest in value. A floor neutral in tone with accents of the brighter colors we use is effective. Because the floor finish (especially if it is sealed-down linoleum, a most common, practical solution) is one of the most permanent additions to the kitchen, it should be selected only after we have completely decided on the colors we wish to use in our kitchens. Keep the background of the linoleum in harmony with the walls and woodwork.

Proportion

If the kitchen is large, dark linoleum borders add to the individuality of the room, but avoid them in small kitchens since they tend to crowd the room. Felt-base rugs with floors painted in a darker, harmonizing color have the same effect as a bordered linoleum.

Wouldn't you like to have a kitchen with shell-pink walls and ceiling and a navy blue linoleum on the floor? Working surfaces could be covered with the floor linoleum.

Or you might paint the walls lettuce-green, the ceiling off-white, doors, cabinets, and woodwork pearl gray. For a smart note paint the insides of cabinets coral. Select for the floor a green, gray, and ivory linoleum, with sheer gray scrim with green and coral design for curtains.

A large, high-ceilinged kitchen could have a wainscoting of pine-patterned linoleum, with the upper walls papered in ivory, on the floor a brown and white linoleum, with bright turquoise blue curtains and accessories.

For Health

Whatever improvement you make in your kitchen—perhaps it may be only the addition of another lamp—will contribute to your health and disposition and will truly help keep you young in providing the little conveniences that mean so much to the woman who spends most of her time in the kitchen or thinking about meals.

The Utility Room

If we had the opportunity of planning our homes ourselves and not inheriting them from the last generation, there's one convenience that plain common sense would direct us to have—a spacious, well-equipped general workroom or utility room where our washing machine, our tubs, our canning equipment could be installed permanently, ready for operation.

Most of the success and beauty of the kitchen depends upon this utility room. This room is everything to the farm home. It is the steamy-laundry-in-the-kitchen, the back-yard wash-house, the old-fashioned summer kitchen—all converted into a place of dignity and cleanliness. It turns dirty work into enjoyable home duties. With equipment in place, gay, printed curtains, light-finished walls, and an easy-to-clean floor, the workroom is the answer to the homemaker's great need.

One family we know enclosed the open back porch, reinforced the floor to hold heavy equipment, and now enjoys an extra room—a very important one. The cost was little; window frames and other millwork pieces were purchased, but much of the building material necessary was reclaimed from other farm buildings.

Another family divided a large, poorly arranged kitchen (where chaos reigned on washdays!) into a smartly modern kitchen and utility room. A partition of sturdy, rigid wallboard now separates that part of the room in which the washing, ironing, and canning are carried on from the kitchen itself.

If it's necessary to combine the kitchen and laundry, there are many things one can do to improve working conditions and make cooking and washing easier tasks. For example, a cover on casters may be made of wallboard or light wood to cover the washing machine when not in use. One family has installed laundry tubs beside the sink. The tubs are covered when not in use and provide much-needed additional working surfaces for many daily chores.

Sturdy maple furniture, of simple design, was chosen for this colorful combination dining- and living-room. The dining table has been placed at the right, opposite the buffet-cupboards, and will seat 20 people when extended

Everybody's Room

No matter how modest, every living-room can be attractive and pleasing to the family, inviting to all who enter it

IS YOUR living-room all the name implies—or is it still the "front room" or "parlor" which is opened only for company and quarterly airings? I doubt that the latter is true, but most of us get so used to our surroundings that we don't notice the way they gradually become worn. The walls have acquired a slightly drab look, the cushion of the large chair has a tendency towards lumpiness, and the cover—well, it's something we've put off for a long time. At first glance you may get discouraged, but don't give up, as there are all sorts of decorating tricks you can try.

Walls

Since this room is used a great deal, the walls should be restful and form a subdued, quiet background for other furnishings. Wallpaper and paint are of equal popularity today, with colors tending toward clear pastel shades. Should your room be long and narrow and just won't look as if it belonged together, coax the ends closer by painting them a warm color, with the side walls lighter shades of the same color. Corner cupboards and bookshelves at the ends will also help to reduce its apparent length.

It's smart, new, and altogether delightful to do clever things with painted and papered walls in the same room—let's say paper for the end walls, and paint which "picks up" one of the paper's colors for the side walls. Or you might use a striking floral-designed paper on one wall, with the other three walls covered in a plain or striped paper. For too-high ceilings, why not bring the ceiling paper down onto the side walls for a foot or so, with a molding; or use a darker tone for the ceiling? Narrow-striped wallpaper carried all the way to the ceiling will help that too-low ceiling. Light colors and two-toned wallpapers with white or light backgrounds make a room appear larger. Give a feeling of unity by either painting the woodwork a light color or refinishing it in a light, mellow tone—remember that a dull finish is more in vogue than a very highly glossed one

Before attempting any kind of decorating, make certain the plaster is firm. If whole wall areas are damaged beyond practical patching, it's best to remove all the old plaster and apply new. Where only a few cracks are to be repaired, a regular patching plaster is ideal. There's also a mending tape which successfully covers the cracks and makes a good foundation for wallpaper. If wallboard, insulating board, or plywood is used, even over badly damaged plaster, it isn't necessary to remove the plaster; the materials may be placed directly over it.

In your room, have windows and doors sprouted in too many places? They'll become shrinking violets if you paint them to match the walls and use draperies that are close in color to the walls. Or that unused door can be entirely covered with a flush panel and decorated like the rest of the walls. Shelves could also be fitted into the door to make room for books and decoratives. If your problem child is an old-fashioned unsightly fireplace, try painting the brickwork and mantel the same color as the walls. Avoid cluttering the mantel with endless what nots — keep it simple, with a decorative figure or two, candlesticks, potted ivy, or a small group of books.

Color is the key to the charm in this lovely combination dining- and living-room. By a wise use of it there has been achieved a feeling of comfort and well-being amid furnishings of good taste. The walls, woodwork, and Venetian blinds are white—not a glaring white, but a tone that has mellowed with use. The draperies are chintz, large flowers splashed against a soft green background. Blending with the broadloom rug of cinnamon brown are the upholstered chairs covered with light plum broadcloth with a white all-over design

Floors

Quite as important as the walls in your living-room is the floor. For this particular room we like to use a room-sized pile rug, as it gives a feeling of warmth and coziness as well as ties the furnishings together into a unit. You'll find designs to fit any style furnishings, and colors planned to blend with draperies, upholstery, and wall-coverings. In this room a rug will no doubt receive hard wear, so it doesn't pay to try to economize on it.

If you've a family, you'll "go for" one of the new all-over designs as they're so practical—best used with plain walls. Or you might like a rug in two tones of the same color—gives a nearly plain effect, but tends to hide footprints and soil. If the floor is unsightly, it would be wise to use wall-to-wall carpeting; but with beautiful floors, a 6- to 12-inch border around a rug is pleasing.

For those of you whose living-rooms receive lots and lots of traffic, you'll like a new felt-base rug or linoleum. They're made to look very much like rugs—and save so much work.

But no matter what floor-covering you've chosen, first of all check the foundation or floor. If you need a new floor, it can go right down over the old one—perhaps planing it down a little under doors. If the old flooring is worn but still usable, make certain there are no protruding nails, and fill large cracks with crack filler. Oftentimes the floor around a rug gets dark and dingy from an accumulation of varnish coats. With a commercial remover, take off all the old finish, sand, and cover the floor with a new dull varnish.

Windows

As much as we try to stretch our purse-strings, perhaps this year we just can't do anything about the walls or floor in our living-room. It does sorely need "something," tho, and here's where a new window treatment comes in. You'll be surprised at the way you can make windows appear larger, ceilings higher, and rooms come to life—all with curtains. And what's more, it's fun!

Why not work out something original and different this year? The type you've been using is no doubt perfectly correct, but just as you wouldn't buy the same kind of hat each spring, neither should you always buy the same curtains.

Say your room is small, with only two tall, narrow windows—hang only sheer rayon net in light beige or white, very full, to within an inch of the floor. Across the top make a wide valance of floral chintz or cretonne, pleated or scalloped. Or, better still, have your handy man make a cornice to be painted a contrasting color or covered with a colorful wallpaper border.

If you've a lovely view across the countryside, play it up by leaving the glass bare, with full, floor-length draperies each side. On the other hand, if the view isn't anything to talk about, screen it with floor-length glass curtains of not-too-sheer material, or use shelves of glass holding plants or colored glassware. Curtain the large glass in the front door with light sheer net, gathered full, top and bottom, on narrow rods—this will pleasantly diffuse the light and give privacy.

In most living-rooms, draperies give a finished look to a window, tho they can be eliminated if you need the light and airy feeling glass curtains alone give. Attractive fringes and trimmings make something special out of net curtains as well as draperies.

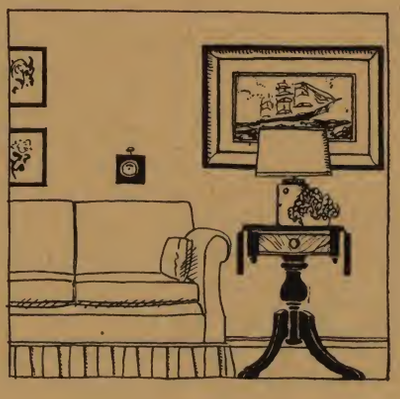
Remember, in making curtains and draperies, that an inexpensive fabric hung in generous folds looks far better than a skimpy one, no matter how expensive it is.

Over a large sofa a horizontal picture can be used with good effect, while over a narrow table a vertical picture is needed to balance

THIS . . .

NOT THIS . . .

A picture should never extend beyond the edges of the object below it as illustrated here at the right. The lamp, of course, should never hide part of the picture



Furniture

Take a look around at your furniture and ask yourself these questions: Do we have enough furniture? Too much? Are there comfortable pieces for all members of the family? Are the covers shabby?

A good starting point is to eliminate those pieces which have no earthly use and only take up much-needed space—perhaps an old "stand" or wobbly table. No doubt some of the furniture that's left needs some face-lifting. Why not a new cover for the sofa in a neat, striped denim, firm cotton chevron, or a floral cretonne? Be careful in using much pattern on such a large piece, however. It's better if you've other design in the room to keep the sofa plain. Bad lines can be camouflaged by a well-fitting cover with perhaps a pleated flounce. Bulging springs can be retied so they'll seem like new. In covering upholstered pieces, maintain good balance between florals, stripes, and plains, without overdoing any of them. For example, if your rug contains green, yellow, and tan you may select a floral fabric which repeats these colors for the easy chair. An all-green textured fabric would be ideal for the sofa, with the seat of an occasional chair covered with a yellow stripe.

Before you discard that clumsy but comfortable chair, cover its awkwardness in a new slip-cover to match the draperies. It's easy to have rockers removed, or to lower a chair by having the legs shortened. Old marble-top tables can be cut down for coffee tables, refinished to suit your scheme. Perhaps these few ideas will inspire you to make useful furnishings out of what are now only "white elephants."

Don't overlook the value of colorful books in furnishing a room. Almost anyone can build shelves and paint them to match the walls and woodwork, their interiors in a contrasting color. They'll help fill that bare wall or corner. Make certain your room has really comfortable chairs. It's permissible to splurge a bit here, and you'll be particularly thanked if you let the man of the house try out his own chair before buying.

A little rearrangement may be all your living-room needs. Place the furniture as it is really used; that is, in groupings, so that persons sitting in the room won't be isolated from each other.

Lighting

Little needs to be said about the importance of good lighting, as we all realize how important it is for good eye health. Today it's possible to provide for every home correct lamps and fixtures at very nominal cost. Fixtures should be of the indirect type, and lamps equipped with reflector bowls and the right-sized bulbs. Plan adequate lighting for each seating space, with enough convenient floor outlets to eliminate the hazard of miles of cord strung along the floor. Now would be a good time to replace those heavy, outmoded light fixtures which detract rather than add to a room's good looks.

Color

Color is important in all decoration because it's the first thing most of us notice. It's our cheapest and most effective tool—so don't be afraid of it! If your living-room is filled with somber taupes and grays, resolve now to remedy this. Have a definite plan for your color scheme, perhaps built around a favorite drapery or upholstery material or a well-liked picture.

With a deep blue-green rug, you might paint the walls light rosy beige, the woodwork white. Have the sofa cover in a deep wine-red, with gray and blue-green patterned draperies, and an easy chair in deep tan.

Or you might warm a north living-room with pale creamy yellow walls, a maple-toned rug, patterned draperies in plum, green, and eggshell, and plain green and brown furniture coverings.

With an Early American hooked design rug as a starting point, paper the walls in soft light blue, with draperies in ivory crash, and furniture coverings in deep rose, brown, and blue.

Here's an Idea!

"How can I get freshness and new attractiveness in my home when my budget allows little more than the bare necessities?"

The answer to this all-important question is to use common, inexpensive materials. Make them up as carefully and as fashionably as if they were the most expensive. And make them up yourself.

One of the least expensive and most versatile of these common materials is unbleached muslin. It is like Cinderella of the fairy tales! From its humble beginning it can be transformed into smart, attractive —and practical—home furnishings that will please even the most critical eye.

Hem it and pleat it for curtains or draperies; weight it if your windows are large or unusually long. A studio window or a small group of windows can be dramatic with draw-curtains of unbleached muslin. For these wide windows where a good deal of fullness is needed, the muslin sheeting cuts to better advantage than the narrower yard width.

But curtains are only one use for unbleached muslin. The heavier-weight muslin or sheeting makes smart slip-covers for your furniture. A white chair or sofa can give a modern note to almost any period of decoration. If you like a touch of color to tie in with your decorating scheme, use colored binding or moss fringe or one of the new braids to outline the silhouette of your chair or sofa. Add a colored flounce and box the seat cushion.

It is well to remember when measuring unbleached muslin for any of these decorative uses that it will shrink. The best method is to shrink your material before cutting and to allow for some additional shrinkage besides.

The secret of giving unbleached muslin a smart professional look is to design your furnishings as carefully as you would in a finer material. Give them the decorators' finishes—such as cording and the boxing of cushions in slip-covers—and make use of the many fashionable braid and fringe trimmings which are shown these days.

These are touches that give your unbleached muslin draperies, slip-covers, bedspreads, and cushions the sophistication they need to compete with the custom-tailoring of professionals.

Buy unbleached muslin by the bolt in sales and try your hand! These home furnishings are easy and fun to make and they will help give your home a new freshness and attractiveness—at a very modest cost.

Doesn't this room look inviting? The sofa is logically placed on the largest wall space at the left, and the two chairs on opposite sides of the fireplace spell solid comfort. Additional chairs can be pulled in to form a very charming grouping

Furniture Balance

The secret of the successful room lies in its atmosphere of hospitality, livableness, and comfort which is acquired by the proper use of balance and arrangement.

Furniture arrangement is fully as important if not more so than its selection; for even the simplest of furnishings, well balanced and comfortably arranged, can achieve such an effect that the average observer will remark little outside the real comfort enjoyed.

It is no simple task to move into a house and place the furniture, purchased for other surroundings, in harmonious relationship, one piece to another. Often the size of the furniture, the shape of the room, provide difficulties that can be overcome only by extreme care and thought.

It is well here to define balance as it is used in connection with well-arranged rooms. There are two recognized forms of balance—formal and informal. Formal balance expresses itself with a more dignified air than informal balance.

Informal Balance

We face a far more difficult task when we attempt to achieve informal balance. We are handling a subtle quality which requires more study and yet has all the charm of apparently being unstudied. You will be aided in the informal balance of a room by keeping a careful proportion between heavy and light furniture, especially in the case of heavy overstuffed pieces.

Ends of rooms should balance each other not only in furnishings, but in the lighting as well. In seeking balance and arrangement of a room the large pieces of furniture should be placed first, one balancing another, then the smaller objects arranged so that they make convenient groupings as well as balanced units.

One will know if one has succeeded in balancing a room if the eye is held the same length of time by each individual grouping. You may successfully combine formal and informal grouping in the same room. It is really a perfect combination, for a little air of dignity is never amiss and serves as a foil to the intimate informal balancing. Color is an important factor in obtaining balance, often providing the necessary note to balance the arrangements on desk tops, tables, bookcases, and chests.

Draw Plans

Before attempting to arrange your furniture, it is best to draw a plan of your home showing the way in which you wish your pieces placed. No matter how roughly your plan is sketched, it will give an impression of how your rooms will appear when finished. A scale of one-fourth inch to a foot is convenient. In this way you may measure the larger pieces of furniture and know beforehand what space they will fit on your plan. If you are building a house of your own and already have your furniture, plan with your architect the placing of the various pieces, keeping in mind the type and size of your furniture.

Paper plans allow you to place furniture and shift it about without the tiring physical effort of actually moving everything when you wish to try new ideas. With furniture well placed, a room should complement the lives of the family that use it, expressing in its arrangement of beauty and comfort the taste and interests of its occupants.

For hospitality and sociability it is wise to plan the arrangement of a few movable chairs about the room. This is where the small table, stool, and other pieces have added greatly to the comfort of modern living-rooms. Two or three conversational groupings of furniture should be arranged for the ideal living-room. It should be impossible for anyone to find himself seated alone in a room unable to join the conversation in a grouping that is just too far away from the solitary chair.

Certain rules apply to furniture arrangements. After they have been complied with you may carry out original and individual ideas.

Examples

One of the first rules to remember is that the important pieces of furniture should always be placed parallel to the lines of the room. Pieces such as sofas, large tables, pianos, heavy desks, beds, and chests placed diagonally in a room express restlessness and are distracting, throwing the whole room out of line. This same rule applies to rugs.

Furniture pieces that can be ideally grouped are sofas, with small tables at the ends, or a low oblong table in front; two chairs, one high, one low and comfortable, with a conveniently low table between; a smoking stand by a deep comfortable chair, and an easy chair by a piano or radio.

The few simple direct rules we have outlined will help you to begin your furniture arrangement. Obey them because they are fundamentally necessary, then fill in with your own ideas.

Do not strive to be conventional or go to the other extreme by posing as unnaturally original. True originality is as a rule born of necessity and is most attractive when it develops in this manner. If you would have your home more than a hotel in atmosphere then turn your thoughts to expressing your own ideas and those of your family.

In the home that has the happy faculty of expressing ease of arrangement there is the feeling that everything has just fallen into place; but you will discover that deep knowledge and thought have been given to such a room and that the charm of atmosphere has not been achieved in a hit-or-miss fashion without planning.

The wall niche, painted French blue and shelving old pewter, adds cheer to this dining-room in the triple-insulated house. The curtains are ruffled organdy, the draperies flowered chintz, and the floor-covering a beautiful French-blue broadloom

Recipe for a Dining-Room

Mix lightly some practical suggestions with the little seasonings of color and ingenuity that count

A light-hearted window treatment like this would be lovely in an informal dining-room. Red and white gingham is pleated to form the valance, tiebacks, and ruffle for the shelf. On this handy shelf are placed red geraniums in white pots, a color accent

TAKE a good, critical look at your dining-room. No doubt it's pretty much as you first furnished it when you started housekeeping. It has served its purpose well, and while the furniture is somewhat shabby and worn, it's still usable. There aren't many of us who can throw out everything we have and start over, so let's see what we can do to *improve* what we have.

Walls

Now would be a good time to get rid of that somber, large-patterned wallpaper, the plate rail laden with odd plates and souvenirs, and the heavy draperies which graced every well-dressed dining-room some years ago. If possible, remove the plate rail entirely, or at least paint it the color of the walls to make it less conspicuous. A plain wall, either painted or papered, is always a safe choice and gives you more leeway in the selection of draperies and furniture. By all means, avoid stippling your walls. With a plain rug, center interest on the walls by using a patterned wallpaper—its scale to be in keeping with the size of the room. A small design in a large room will be lost, while a large design in a small room will be overbearing.

Should your walls be in poor condition, completely cover them with versatile wallboard—either in paneled effect or as a plain, painted wall. In a dark room, use a wall-covering which reflects light, such as those in ivory, yellow, and beige; in a too-bright room, select gray-green, soft blue, or gray.

Swallow that last bit of reluctance and cover that heavy dark woodwork with a coat of fresh new paint—it's amazing what a pick-up this will give!

Floors

Perhaps it's the floor which drags your room down. There's nothing more practical or good-looking for a dining-room than

Dress up a bare wall with an unframed mirror and matching hanging ivy. Hanging pots like these you can get inexpensively at the dime stores

To renew your old chairs, make slip-covers of colorful, washable material for the backs. They're cool, practical, and easy to make, as well as good-looking. If you wish, you can make matching slip-covers for the chair seats

To replace an outmoded, heavy buffet, bring down that extra chest. Strip it of its fancy trimmings and give it a new coat of paint or varnish. You'll like the additional drawer space, too

Corner cupboards like these are available ready-built, or you can build them yourself. With colorful interiors, they'll make a lovely background for your choice china, silver, glass, and other treasures

To fill a bare corner, give an unfinished corner whatnot a coat of light green or ivory paint and arrange attractively on it several china or glass decoratives

Another trim cover which you could easily make for your chairs, adding a bright note to an otherwise plain dining-room

a good felt-base rug or linoleum. The new designs and colors are so attractive that we'll wager you'll be "doing over" your whole room to keep up with the floor. If your floors are in good condition you may want to leave them bare, with throw rugs. Make certain they have a good stain.

Windows

Perhaps you can't make such major changes as re-covering your walls and floor. But how about your windows? Chances are you've used the same type of curtain treatment for several years. Why not give them a new dress? If your walls are plain, choose a gay floral design in a cotton print or rayon weave, hung straight to within an inch of the floor.

If your room is small, sheer, plain-silk or cotton net gracefully draped helps create an illusion of space. If you're fond of plants, why not use them instead of curtains? We saw one dining-room window on each side of which were mounted metal brackets containing trailing ivy. Glass shelves from the dime store, filled with colorful plants, hung on the window itself.

Those old dark-green window shades probably still do their job of keeping the sun out—but what a gloomy sight they are. For a modest sum you can buy excellent shades, either paper or fabric, in such lovely colors as rose, light blue, yellow, peach, or ivory. Or look for the new slat or bamboo shades, or the fiber blinds—so smart-looking and yet not expensive!

Furniture

To rejuvenate the furniture, remove all the old coats of varnish and give it a new finish—or paint it to contrast with the rest of the room's color scheme. The table could be left as it is, with the chairs in a light color such as ivory. Remove the mirror, frills, and high legs from that old sideboard so that it will resemble a chest and arrange on its top flowers, candles, or several pieces of silver or lovely china. You can modernize your old china closet by painting the interior of the shelves a lovely contrasting color and planning a new china or silver arrangement in it.

Should you be replacing your dining-room furnishings on a slim budget, here are a few suggestions: Instead of buying a matched set, make up your own. First, select your table, which might be a drop-leaf, draw-table, or refectory type, and use with it Windsor or ladder-back chairs. If the table is simple, you could even use plain, oval-backed kitchen chairs fitted with a tie-on pad seat. Unfinished furniture painted to harmonize with the rest of your color scheme would be inexpensive.

Perhaps all your room needs is a new arrangement. If only two or three are to be seated at the dining table, it will seem cozier to move it away from the center of the room, with its end at a window with a pleasant view. Or it could be pushed up to a wall with a set of wall shelves over it to hold colorful dishes and plants.

Lighting

Too much stress cannot be laid upon the importance of lighting in the dining-room. If your room has a center drop light which throws a glaring light directly into the eyes of those at the table, invest in one of the overhead fixtures which are made so as to throw the light up toward the ceiling and allow only a soft glow to fall upon the table and your eyes. Or, for less money, equip your present fixture with one of the many devices now on the market to modernize old fixtures. Kerosene lamps should have large, light shades which will diffuse the light and not throw it all downward. They may be hung from the ceiling, but should be above the eye level of those at the table.

If your telephone is in the dining-room, and you plan to make a change in the walls, why not lower it so that you can sit down when using it?

Color

If your room seems cold and bare, use color to help furnish it. Choose lemon-yellow on the walls to bring the sunshine indoors, with a deep-green marbleized linoleum on the floor. Very full ecru net curtains might be topped with a simple cornice painted green. Should the lemon-yellow be too bright for your room a warm beige would be lovely, with a bright rug and soft blue, floral-designed curtains. Blue could also be used for the chair-coverings.

One of the most cool and refreshing

Give new life to that bleak, bare dining-room by adding a corner cupboard. Paint its interior blue to contrast with warm beige walls

soft blue walls, sheer apricot silk could be used for curtains, with a deep gray rug.

More Ideas!

We don't want to introduce too many different ideas, or the room will lose one of its most important qualities, restfulness.

It may be that the budget will permit one of those attractive new rugs with the design in the texture, or one with a smart, conventionalized all-over design, or a felt-base rug of excellent design. But even if we can't have a new rug or carpeting we can do some tremendously attractive things with what we have.

After a careful study of the room, we note that underneath all that stained and scratched varnish there's a good-looking dining suite. And the green tone of the rug, whether it's an old one or brand new, is far too lovely to be ignored. (Or perhaps in your case it's a blue rug or a figured rug.)

But the limp, colorless curtains are a definite handicap. The woodwork appears to be a sad mistake. Even the walls need a new lease on life.

With a few dollars, some hard work, and a little imagination, this state of affairs is only temporary. Using a green rug as the keynote of the campaign, we advance first on the background of the room.

A commercial paint-remover, a putty knife, gasoline, and sandpaper take care of the ugly varnish or paint finish on the oak woodwork. Once this old finish is removed, we discover that the wood has a really nice grain and needs only a bit of wax and some polishing. (Tho, of course, in some cases the woodwork might be past saving and we'd have to consult with the nearest lumber yard as to attractive, durable, new moldings and floor boards.)

The lovely, mellow woodwork we've uncovered, and the green rug we started with seem to call for soft yellow walls. Accordingly, we remove the old wallpaper, and replace it with an inexpensive paper—

This dining center is located just off the kitchen in a small room made attractive and pleasant by the window treatment and corner cupboard

For a kitchen corner: a colorful spot the family can enjoy. The matching cloth and chair cover are made of fabrikoid

color combinations for a dining-room is that of blue and gray. Walls could be covered with a clear gray wallpaper with a small white pattern, the felt-base rug in shades of blue and gray, with sheer blue net hung at the windows, very full and straight to within an inch of the floor. Chair seats in deep rosy-red would be both practical and beautiful.

Soft gray-green is an excellent foil for walnut furniture, and might be used plain in either paint or wallpaper. With this the floor could be stained dark brown, with deep green scatter rugs. Floral-designed draperies with a soft, wood-rose background would be lovely.

One successful dining-room has ecru walls and ivory woodwork, luscious gray-green painted furniture, and deep brown rug. The curtains are of bright green, yellow, and white chintz. Or in a room with

At loss as to where to begin? Sometimes simply moving a table will give you ideas for doing over your dining-room

waterproof if this dining-room is really a corner of the kitchen. Or, if the walls are painted, we'll redo them with a soft, dull, paint. For the old curtains we substitute inexpensive chintz—ivory, with a pretty floral pattern in green, coral, and yellow.

Enamel cleverly camouflages many a time-and-use-scarred dining-room table and chair. It can be used with enameled or waxed woodwork, since the two need only harmonize, not necessarily match. Using two coats of flat paint first, and then at least two coats of well-recommended enamel, you will find this refinishing process simple.

If your dining-room walls are paneled instead of papered or painted, all they may need is cleaning and waxing. If they need repair or replacement, see your local lumber dealer. Ask for the attractive wallboard that can be applied directly over old and broken plaster. It has a smooth finish, ready-primed, and gives a charming paneled effect with no visible cracks or joints. Wall and insulation boards may also be had in knotty pine, cedar, and other surface finishes.

Whatever we do to our old furniture and its background, we should keep it as simple and distinctive as possible. Remember, it's no longer a room to which we rush at the last minute and from which we tear at the last bite of pie! It's a thoroly livable room, warm in feeling and uniformly attractive thruout the changing seasons. If there is too much furniture, too many knickknacks, and too much design, it will appear confusing. Without enough, it will lack personality and interest.

If, for lack of cupboard space, we've had to balance dishes precariously on top of one another, then by all means, this is the time to remedy that situation. We'll have the boys put in one of those attractive factory-made corner cupboards.

Or perhaps you may prefer a chest of drawers, or a desk where the household accounts may be kept, or two serving tables which may be wheeled up next to the dining table during mealtime.

Decorative pieces, such as pewter plates or bowls, wooden figurines, and well-designed candlesticks, may be placed on the buffet or on open shelves of the linen chest to good advantage. If the wallpaper has a definite figure, it is often better taste and more effective to contrast the small objects against a plain-colored tray, standing upright.

The built-in cabinets and shelves in this room are attractive as well as extremely useful. The table is maple and can be extended to twice its length. The floor is covered in large-square tiles

With gay pieces of pottery, we can repeat or accent the other colors in the room. Pictures and wall hangings give us a splendid opportunity to do this.

If the walls are rather plain, the room can easily stand several things on the wall. A large linen or chintz hanging printed with conventionalized figures or scenes is often just the thing for the large wall space above the buffet.

Where we have a large wall space, we'll use a large picture or two medium-sized pictures, similar in subject and framing. Pictures to be used in the dining-room should be as amusing and pleasant as possible in subject and coloring. Plant stands and flower arrangements are both important and appropriate.

Whatever we have in this dining-room of ours, it must be keyed to the other things in the room and to the background. The loveliest colors and the best-looking furniture are wasted unless they are related to each other. Fine glass and exquisitely wrought silver are definitely out of place with plaster walls and heavy furniture. Rich satin draperies have no place in the average country home, either, but neither have shabby furniture and odds and ends of dishes!

Once we've brought this important room back to life, it can't help being remembered! It's a charming, livable room now, and it can take its place proudly with the attractive living-room and even that shining, convenient kitchen with all its efficient new equipment for everyday.

This dining-room is charming in its simplicity. The walls are covered with paper which has a vine design on a light cream background. The dado is painted to match the full-length corner cupboard

Simplicity is expressed in this room by the choice of furnishings. The ball fringe on the curtains matches the trimming on the bedspread, and the color is carried out in the small design on the wallpaper

Beautify Your Bedrooms

A little planning, a few dollars, and considerable time on your part can result in attractive as well as comfortable rooms

WHEN you open your eyes each morning, are you pleased with the way your bedroom looks? Or is it pretty drab and colorless—filled with leftovers from other rooms? Too often this is the case—so let's see how we can bring a tired and worn bedroom back to life.

Walls

The background of the room plays a big part and should be carefully chosen. If your furnishings are simple and informal, you'll want a wallpaper design in keeping with them. Or if it's paint you're using, choose a color which will best set off these furnishings. Keep in mind that both designs and colors for bedrooms should be restful, not distracting; subdued in color, but not dull. Here's the place where you can really carry out your personal likes. If soft blue should be your weakness and your bedroom faces north, use it anyway—but combine with it a luscious warm peach, golden yellow, or deep dusty rose.

A common fault with bedrooms is that they have a cold, bare look. Overcome this by using a lovely figured wallpaper in warm, light colors. For a sizable room buy a large, important design in soft pastel shades; for smaller rooms, have the walls either plain or covered with a quaint, small, all-over pattern.

If you've a dormer troubling you, make a feature of it by painting it a solid color in contrast to the rest of the room. Paint the sides of the dormer sunshiny yellow, and you'll double the amount of sunlight reflected into the room. A mirror on each side, too, will create this same effect.

Should the walls in your bedroom have a definite slope to the ceiling, paper up to the edge of the slope, and paint the slope and ceiling a matching tone. Or use the same paper up over the slope and ceiling as on the walls.

Always remember who is going to occupy the room—Dad won't be at home with dainty bowknots and posies any more than Daughter would like plain, paneled walls. For the master bedroom use a conventional pattern—subdued floral, stripe, or plain. The youngsters' rooms decorate according to their likes, both as to color and kind of furnishings. Children have very definite personalities and you'll be wise to provide a place where they can be expressed. For a boy's room you might use wallpaper with a design of maps, ships, airplanes, or almost any hobby he might have. Girls like pastel papers with dainty bows and flowers.

You'll lighten any bedroom by painting the woodwork white, ivory, or a color to blend with the walls. Soft-colored ceilings are more pleasing to the eyes than stark white or a dull, muddy color.

Floors

The peak of luxury is to have an all-over carpet on the bedroom floor, but until the day our ship comes in, we'll have to content ourselves with less. There are inexpensive fiber rugs which are excellent for bedrooms, and don't overlook linoleum or a felt-base rug—practical and easy-to-clean for the children's rooms. If you've beautiful floors, leave them uncovered, with several good-looking throw rugs. Place these parallel to the walls or each other, or your room will look out of line.

The pretty ruffled curtains here would be just the thing for a young girl's room. They are made of gingham and most of their charm is found in the gay print. Note the deep ruffle at the bottom. The same material could be used to make the bedspread or to slip-cover a chair

Remove chipped and cracked varnish from the floor with a commercial remover, sand, stain dark-walnut brown—and your floors will look like new. Large cracks can be filled with crack filler before refinishing.

Windows

Since most of our bedrooms aren't blessed with well-shaped, uniform windows, the problem of window treatments rears its ugly head. Of course ruffled net, tied back, is always "safe" but surely not very interesting. Windows of different lengths may appear the same by hanging the curtains all the way to the floor; with those of different widths, extend the rods to hold curtains out onto the wall each side of the trim.

For that room with plain walls, why not hang draperies of a lovely floral chintz with pink flowers blossoming against a white background and green leaves? It could be draped gracefully thru festoon rings at the top to form a valance. Very full ruffled marquisette curtains of the crisscross type can be dressed up with a valance and tiebacks of colorful cotton print. Sturdy denim or cotton crash makes excellent curtains for a boy's room, hung straight to the sill or apron. Any young girl would love frilly organdy or dotted swiss curtains and dressing-table skirt. Ordinary cheesecloth can create a most luxurious effect when hung full and gracefully draped back.

You'll find there's nothing quite so satisfying and thrifty as making your own curtains. The saving allows you to buy better materials and work more originality into the window treatments.

Don't overlook the importance of good window shades or blinds in your bedroom. Venetian blinds are particularly suitable as they shut out glaring light, yet admit air. Or you'll like the light pastel colors you'll find in some of the fiber shades.

Furniture

The most of us can't completely discard all the furnishings in our bedrooms, however disreputable they might be—so we'll just have to make the most of what we have.

First of all, get an excellent mattress and springs. If your money won't stretch far enough to include a new bed as well as mattress and springs, spend it all on the latter, and mount them on a plain metal frame. Well covered with an attractive spread, this makes a most modern-looking bed. An old-fashioned bed with a high headboard looks extremely up-to-date with the footboard substituted for the headboard. It may be either painted or covered with a gay slip-cover to match the bedspread. It's easy to shorten the legs on a high bed to bring it down to today's level.

Remove the "gingerbread" from that old dresser, refinish it as a chest of drawers, take off the mirror and hang it separately. If there's no place for the old library table in your living-room, refinish the top and put it in Junior's room for his worktable or to hold his fast-growing collection of this and that.

The bedroom is an ideal place for a sewing machine that can't find a home elsewhere in your house. If it needs dressing up, hang a glazed-chintz or cretonne skirt to a building board top and let it serve as a dressing table in off-sewing times. Here, too, you could place a desk—a quiet spot to work on family and farm accounts.

There never was a young girl who didn't love a dressing table, whether it was just an old washstand or a glass-topped de luxe model. Let your daughter help you make one for her room, using as a base a small table, orange crates, or even a shelf attached to the wall. Give it a gay, tailored or dainty, frilly skirt—to match either the curtains or bedspread. For the bench you might bring out that discarded piano bench, an empty nail keg, or buy a stool ready-made for this purpose.

Don't overlook a comfortable chair or two, well lighted, in your own room—a place to snatch a few moment's rest or do the week's mending.

In filling out your supply of linens and blankets, set your heart on quality. For instance, if you have only a small bit of money for sheets, allot *all* of that money to buying the best ones you can afford. Select the ones you want to reorder later, and you'll be money ahead in the long run.

Lighting

Good lighting is fully as essential in the bedroom as in any other room. You'll want a center top light to turn on to find that elusive collar button under the dresser—make it an indirect type with a fixture especially designed for bedrooms. For you readers-in-bed provide a good light just for this purpose, perhaps a pin-it-up lamp which can be hung where you need it. When buying lamps for a dresser or dressing table, it's a mistake to buy short, squatty ones in spite of the fact that they're so "cunning." Instead, choose tall ones which throw the light at face level.

Color

Like all other rooms, you can set the theme of a bedroom by the colors you use. That upstairs south room where the sun beats in all day might have cool gray-green walls with woodwork the same color and a ceiling in pale, rosy beige. The floor stain dark-walnut brown, over which lay throw rugs in beige and brown. At the windows hang Venetian blinds in ivory, with generous folds of beige theatrical gauze draped gracefully back over them. The bedspread could be in cool dark green, with a huge ivory monogram in the center—very smart!

A young girl would like walls papered in beige with small, all-over pattern in brown, white woodwork, and a pink ceiling. Salmon pink could be the accent note carried out in the bedspread and a valance to be hung over very full white ruffled net curtains of the crisscross type.

The guest room walls you might paint soft blue or paper in blue with a white figure. On the floor use a rug in deep peach and brown, with draperies in gold and blue, and a plain blue bedspread.

Ever-popular plaids might find their way into a boy's room. Walls paint a plain warm ivory, with the woodwork the same. On the floor lay a deep blue patterned linoleum and choose a gay, colorful plaid in red and blue for tailored curtains and bedspread.

Closets

If you're like most homemakers, you don't have enough closets. There's no time like the present—so plan now to provide

One can scarcely believe that this charming bedroom was once an unused storeroom. The walls and ceiling are finished in wallboard and its natural color is an excellent background for the bedroom

To make a little girl very happy—a room of her own. Altho it is very tiny and actually tucked under the eaves, its arrangement would delight any little girl. The wallpaper has a gay, Mother-Goose motif

more storage place for clothing. Those of you who have large, long bedrooms can partition off 2 or 3 feet all the way across one end of the room. At each side build in closet space and drawers, with enough room left in the center for a built-in dressing table. Or you might take off a portion of the room for a regular closet. If this isn't possible, you'll find portable cases in the stores which fit nicely into any bedroom. Or you can easily make one yourself of crates, large boxes, or odd lumber.

It's clever to tie the color scheme of a closet in with the bedroom it adjoins. A blue bedroom might have a closet in deep wine and rose; a green room, a closet in peach and brown.

Above all, install a good light in every closet. You'll save lots of confusion and good dispositions!

Good Beds

One of life's minor tragedies is that so many people live out their days without having slept once in a really good bed. And it isn't a question of "what you never have, you never miss." In an uncomfortable bed you miss restful, enjoyable, refreshing *sleep*.

We cannot live long without sleep. Generally speaking, we all spend one third of our lives in bed, eight hours out of every 24. So, if you live to be 90, which is not at all impossible, you will have spent *30 years* of your life in bed. Sounds almost unbelievable, doesn't it? As a class, farm people really need and deserve better beds than almost any other group. They work harder; they work longer; they get completely tired, physically.

How Many?

Take an inventory of the beds in your home today. Do they run mostly to the old-fashioned, brass-bedstead type? Are the springs sagging, the mattresses hard, lumpy? Are some members of your family sleeping on uncomfortable cots? So far as is possible, does each child have a bed of his own?

If the answers to these questions are not what you would like them to be, don't be discouraged. Plan now a program of bed-renewing for your family. Perhaps the first step should be a new double bed, or twin beds, for you and your husband. Or perhaps daughter needs a new bed all her own for the room she is so interested in furnishing. Or how about the boys' needs? Why not one of those durable, comfortable twin studio couches, which doubles as a sofa in the daytime and makes a pair of twin beds at night? Perhaps some of your bedsteads are still in good condition, and need only new springs and a new mattress to make them comfortable.

Bedsteads

If you must economize, the place to economize when buying a bed is in the bedstead itself. Springs and mattresses, on the other hand, should be as good as you can afford. It is possible in some communities to buy a good, solid maple, or mahogany-veneer-on-maple, double bedstead for about $20. Delightful twin studio couches for a boy's room are priced under $30 each. Prices differ in various sections of the country, but do a little investigating in the stores where you live and you will be surprised at how well you can buy. For a girl's room, nothing could be sweeter than a very inexpensive, unpainted bedstead, which she could paint and decorate herself. Or you can buy charming beds already enameled and decorated, to harmonize with the color scheme you have chosen.

Box Springs

Now, as to springs: to be comfortable, springs must fit themselves to the curves of the body and keep you sleeping upon them in a level position. No one "sleeps like a log" at night; we all move around in bed several times while we're sleeping, and the test of a good set of springs is whether or not it will accommodate itself to these moves of ours. You all know the type of springs which sag so much that your body settles into a deep groove in bed, and you spend the night tossing and turning to get out of that groove. So buy the best springs you can afford, and as the years go by you will never regret having spent those few extra dollars for something which will give you so much real comfort.

Box springs are usually the best type. They are constructed with upright, coiled springs tied together at the top with spiral-shaped springs, which permit each upright coil to move up and down independently. You can easily see how such an arrangement permits the springs to adapt themselves to your body without the entire bed sagging. Box springs are built with a frame which is covered with protective fabric.

Open-Coil Springs

A second good type of springs are *open-coil* springs. When these are well constructed they give satisfactory service. These springs also should be tied together at the top with spiral springs, to permit each coil to move up or down without affecting other coils. Watch out for coil springs which have the coils tied together with wires. This type will not adapt itself readily to the shape of the body.

As a final word, remember that even people who live in every kind of luxury do not know what a good night's sleep really

Here's an idea for that alcove in your upstairs bedroom. A simple shelf built out from the sill makes the table, with turquoise oilcloth and apricot net for the skirt and curtains

If your bedroom is dull and tired-looking, perk it up with a gay floral chintz valance hung over white marquisette glass curtains. Use this same chintz for the bedspread or chair

This girl took an unused room in her home and transformed it into the charming room shown here. It was her home-furnishing project and won her an award

Pin-up lamps with white shades to match the bedspreads are an inexpensive asset to this bedroom. These are trimmed in ball fringe. Walls can either be painted a clear pastel color, which is so restful, or papered. A ceiling light is a convenient fixture

means unless they own good, comfortable beds—and you would be surprised at the number of people there are with both taste and money whose beds are woefully lacking. So, if there are uncomfortable beds in your home, *do something about them.* Then, when you return from a visit, you can mean it when you say "It's so good to be home!"

Girl's Room

A room of her very own! That's one of the fondest dreams of almost every girl. And to do the planning and decorating yourself makes it something extra special. It doesn't take lots of money or a course in interior decorating. Instead, it calls for ingenuity, careful planning, and hard work. Each of your rooms will present different problems, but you can get inspiration from the way some girls have transformed their rooms into light, restful, and attractive spots at a minimum of expense.

Three dollars in chicken money was all one girl could count on when she started fixing up her bedroom. Perhaps your room is the same type as hers was—a 16- by 20-foot upstairs bedroom with practically no wall space because the ceiling slanted to within 18 inches of the floor on two sides of the room. Needing wall space, she figured that at least 3 feet had to come off each side of her bedroom so that false walls could be built in.

She bought light green wallboard and the same shade of calcimine for the walls. Then she painted bed, chair, and dresser to match; painted, varnished, and waxed the floor a dark brown, and refinished the woodwork. Flowered print draperies and glass curtains, leftovers from other rooms, were hung at the two windows.

More Closet Space

She's planning now to build shelves into the space created behind the wallboard so she can tuck blankets and school supplies out of sight. One of these times when she has done some more minute measuring for wall space, she's going to build a clothes closet.

If your room lacks closet space, here's a good place for you to start. It's easy to partition off a corner with wallboard.

Maybe it's the walls in your room which need repapering. Why not do it yourself? One girl took the storage room in her home as her particular problem. A dormer room, approximately 13 feet square with a north exposure, gave her an opportunity to apply her home-furnishings training in the use of color. Promised the room for her own, she changed the faded blue and tan complexion of the walls to a warm, rosy shade of pink wallpaper. Total cost was $3.25.

By using the same paper for ceiling and walls, she created the illusion of more height in the room and subdued the effect of the slanting side walls. The gray woodwork was repainted a delicate ivory and the blue-gray floor an oak brown. Two pairs of dainty white curtains hang in the room. Next step is to obtain some furniture. She wants simple, lightweight pieces, painted a rosy-pink color, with blue accessories to carry out the color scheme. Finally a wardrobe closet will be installed in front of and covering an unused door.

Colorful Ideas for the Bathroom

Plan it for convenience, but don't overlook the brightening touches that make it attractive

Here is a good-sized bathroom that would be a joy to every member of the family. If your house is large, don't skimp on bathroom space. The walls and floor in the bathroom pictured above are linoleum, altho any other good, durable, moisture-resisting material would be appropriate

WE'VE come a long, long way in the last few years in improving the bathrooms in our farm homes. Having installed one, too many of us have left it at that—with the result that while the room serves its purpose, it's utterly lacking in charm or added conveniences.

No doubt you've been planning to do something about your bathroom for some time, but the house needed a new roof, the tractor needed repairs, or some other expense arose which put it off. It isn't always necessary to spend a lot of money; if you're clever, you'll be surprised at what an improvement even five dollars can make—perhaps new wallpaper, or even the addition of new towels and curtains.

The bathroom being small, it's not the same thing as doing over the living-room—so you can really let yourself go with its decoration without worrying about what the neighbors will think. Whether you're remodeling your old bathroom or installing a new one, let's start from scratch and see what the possibilities are:

Walls and Floors

We'll consider the walls and floors together because it's possible to use the same material on both. For the walls choose a material that is impervious to moisture and steam, that will wash clean with a whisk of a wet cloth, that will be free of cracks and crevices that might harbor dirt, that is easy to apply, and that will require a minimum of upkeep.

Probably the most practical covering is the old stand-by, tile. It's permanent, easy to keep clean, and available in many rich, gleaming colors. For the floor you might choose tile in a deep tone, with the walls a shade or two lighter of the same color.

But you can't afford tile? You can get much the same effect by using one of the many colorful composition and enameled-board tiles which are fast gaining favor for bathroom walls. These materials are frequently more than merely wall-coverings; they can be the actual wall itself. Sturdy enough to be nailed to the studding and beautifully finished with scored lines to simulate ceramic tile, much board tile is ideal for new work. Other tile of this type is really an insulating board, and combines construction, insulating, and decorative quality all in one product. The finish may be a glassy-smooth, baked-on-enamel in a wide range of color choices; or it may be bare fiber, smoothed and sized ready for a coat of enamel on the finished wall.

Linoleum

Linoleum is another versatile material which will bring any bathroom out of the doldrums. Choose a wall linoleum in a pastel marbleized design, with a plain linoleum decorated with smart insets and a contrasting feature strip on the floor. Wall linoleum is the same material as inlaid linoleum for floors except that it is lighter and thinner. It is characterized by a smooth, sanitary surface. Colors go clear thru to the back—it never needs refinishing. It can be used over either new or old walls provided these walls are smooth. Some linoleum for walls comes in continuous sheets from floor to ceiling, and some in the form of tiles that are cemented to the wall. You simply spread cement on the tile like buttering a piece of toast, and apply it! Have the linoleum applied with rounded corners and a cove base at the floor—makes for easy cleaning.

Wallpaper

Perhaps your purse won't stretch far enough to include these wall-coverings, but never mind—there's always wallpaper and paint. No need any longer to shy away from wallpaper for bathroom walls as you may choose from a wonderful assortment of designs made especially for bathrooms. They're washable and waterproof, and an excellent way to add interest to a plain, dull room.

Don't overlook fabric wall-coverings. Besides being washable with soap and water, they hide plaster cracks most successfully. Too, they come in a wealth of colors and designs, from smart stripes to neat florals and nautical motifs.

Paint, of course, is always a popular choice for the walls, and you'll never go wrong with it if you choose a good quality that is washable. Paint that dark wood wainscoting a light shade to match or blend with the rest of the walls—it won't be nearly such an eyesore.

Perhaps the walls and floor of your bathroom aren't in need of redecorating, but the room does seem to need a "pickup." Instead of curtains, install a white Venetian blind with colorful tapes. Buy smart decalcomania transfers in the dime store to apply to your newly painted hamper and chest. Or maybe a set of new towels in a colorful design will be all you'll need.

Most likely one bathroom must serve your entire family, so try to make it as comfortable and convenient for each member as possible. Most bathrooms need more places to put things, so provide if possible a shelf for each of you, keeping in mind that the children's should be within their reach. Too, you'll save yourself lots of "picking up" if you'll install a row of easy-to-reach hooks for the children's clothes. Over the lavatory have a good-sized medicine cabinet with a mirrored door and deep enough shelves so that bottles won't come cascading out every time the door is opened.

Fixtures

Everyone will be happier if he has his own towels and rack—identify these with names embroidered on the towels, or let each person have his own color. In a bare corner or other unused spot build a small chest or shelves to house extra towels, soap, and bathroom equipment. Make it decorative by covering it with wallpaper, gaily painted designs, or decals. If you've room you might even include a dressing table, tho if the room gets a lot of use, it's wise to keep it simple and not too frilly.

Should the fixtures be out of date, and

A roomy linen closet is never more handy than when located in a corner of the bathroom. It's a good place to store bed linens. Note the excellent mirror lighting and the convenient shelves in the room pictured above. Washable wallpaper has been used on the walls

Here is an L-shaped room that has been made into an attractive bathroom. The cabinet sink has been placed beneath the window, even with the window sill. Note the treatment of the window, the curtains, ruffled and tied back, covering only the top half. A smart, checked motif has been carried out in the linoleum flooring and the rug

you don't feel you can replace them, try this: the bathtub with legs might be cleverly plastered in straight to the floor so that it closely resembles a modern tub. At the end of the tub build in a convenient hamper with hinged lid for soiled clothes or a compartment for storage. Or you might paint the outside of the tub the same color as the walls or floor to make it less conspicuous.

You'll detract attention from the homely lavatory by installing a glass shelf or two over it, on which arrange several good-looking bottles of lotion, powder, and such. Your family will thank you, too, if you provide good bathroom scales and a waste-basket—small things, but important if they're not there!

Windows

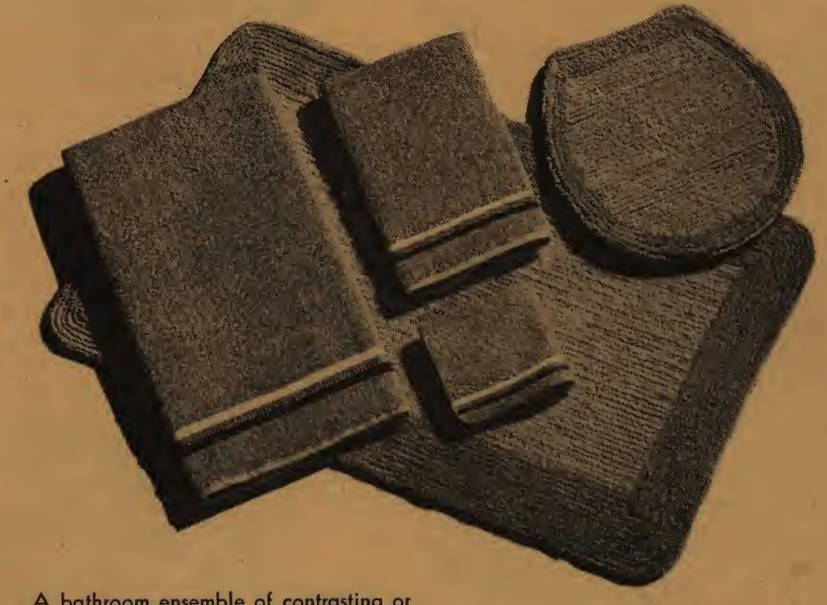
Windows in bathrooms should let in all the light possible, but be curtained enough for privacy. Oiled silk is about the best answer to this—it's easy to clean, won't wilt from heat and steam, and is good looking at the same time. Washable cotton prints also make suitable curtains, while nets are used some, but are not so practical.

Window shades should be of good quality that will not show water spots or soil easily—there are some that are actually washable with soap and water. Since there aren't many or large windows in a bathroom, the purchase of Venetian blinds shouldn't break you up—they can be used alone or with curtains.

Fabric blinds are very attractive. Usually they can be obtained with matching or harmonizing tape. The fabric roller shades, while not as durable as the blinds, are also attractive and can be used on windows located a safe distance from water.

Lighting

For good lighting, in addition to a ceiling fixture, have installed a good tubular light each side of the bathroom mirror. Any man will tell you how difficult it is to shave with the light behind his back. Too, you'll need an outlet above and to the right of the lavatory for electric curling iron and electric razor.



A bathroom ensemble of contrasting or harmonizing colors will brighten a room

Color

Before starting to decorate your bathroom, it's important that you have a color theme to build around. It might be a beautiful towel set, a colorful linoleum, or a gaily patterned wallpaper. Spend some time looking around in bath shops and leafing thru magazines—you'll find ideas.

For example, a blue and white wallpaper with a nautical design might set the motif for an entire color scheme. With it use a deep blue linoleum with narrow white feature strip, white woodwork, and gay red and white striped curtains. Snowy white towels and bath mat would complete the room.

Or you've just seen a luscious big bath towel in lemon yellow with neat monogram in turquoise. Can't you just see a bathroom built around this—pale yellow walls, white woodwork, black and white marbleized linoleum on the floor, and turquoise towels and oiled silk curtains?

If you like the feeling of cleanliness a white bathroom gives, you might combine with white walls and woodwork a pine-green linoleum and coral, green, and white curtains and towels.

Perhaps you were given a set of deep, wine-colored towels with white bands. Why not use on the walls shell-pink wallpaper? With this use a black and white linoleum on the floor, white curtains with black design, and yellow accessories. Whatever you may plan, have plenty of color!

Light Your Home for Better Living

Well-chosen and well-placed fixtures and lamps will lighten all your household tasks as well as brighten your hours of relaxation

Here is shown an example of good lighting when electricity is not available. The fuel is kerosene and the lamp has two mantles, producing a clear and bright flame

NOW that electrification is spreading thruout the country, all the convenience, the safety, and decorative advantages of electric lighting have come to the farm to stay.

With electricity installed, the homemaker can hardly wait to go shopping for her new, modern electric lamps. But once faced with the array of attractive styles and types, it seems a bit puzzling as to what to choose. The selection is made more easily and certainly more wisely if we remember that, just as in anything else, there is only one correct way of doing this job of lighting our home if we are to achieve the best results in comfort and attractiveness.

To arrive at this correct way we will always keep in mind that the first duty of any lamp is to give light. We have only to choose the lamps which produce the kind of light needed at the different locations thruout the home. Obviously, much more light is needed when we read or sew than when we merely sit listening to the radio or chat with friends. And the reading of fine print requires more light than bold, heavy print. Of course, all lamps, whether they are for the "seeing" task or just for "atmosphere," should be of design, style, and color to harmonize completely with the rest of the room. Frequently a design or trimming on the shade can be chosen to harmonize with a room's furnishings. Of course, clear-white or light-pastel colored shades are always good.

There's one sure way to choose a lamp that will give correct light—buy those that carry an I. E. S. tag certifying that they have been approved by the Illuminating Engineering Society for correct lighting.

Living-room

For each room in the house, you'll want to choose a definite type of fixture. In the living-room, where the members of the family gather in the evening, the lighting must be flexible enough to provide adequate, glareless light for reading, sewing, and games, or soft, restful illumination such as you might desire for conversation or a quiet evening of music.

You'll want a ceiling fixture of the indirect type which reflects the light to the ceiling where it is in turn reflected thruout the room. Floor and table lamps are necessary at every place where one sits to perform any task such as reading or sewing. Wall brackets should be considered for their decorative value only, tho those of the indirect type do add to the general room illumination. Alone, they do not provide enough light.

Don't neglect to provide a good light for your front entrance and hall. It not only lights the way but welcomes guests with a hospitable greeting.

Dining-room

Glaring, unshaded light bulbs have no place in the dining-room of today. Provide a good ceiling fixture that gives a softly diffused light. Whatever its type, it should not throw glaring light into the eyes of those at the table. Shaded wall brackets are often used with, not instead of, a ceiling fixture.

Today in many homes the bedroom is used much the same as a living-room, and should be lighted accordingly. First of all, choose a central ceiling fixture for general lighting. Make provision for a good bed light that is right for reading and not merely a decoration. Too often dresser lamps are short, squatty affairs that are far from useful—for your room choose lamps of a height which will throw the light at face level. Should your bedroom be blessed with a comfortable easy chair, place beside it a low floor lamp or table lamp.

Bathroom

The most important mirror in the house is in the bathroom, for it is here that the menfolk attempt to shave. Yes, only *at*

Westinghouse

For safety, for convenience, light the rear entry. This photograph shows a home with light attached to a bracket. The fixture is weatherproof and the light clearly illuminates the door and yard

A diffused light over the sink is a first essential in lighting the kitchen. Working surfaces may be properly lighted by bulbs concealed beneath the wall cabinets, directing the light downward. Be sure to plan to have enough outlets for equipment

tempt to shave if the mirror is inadequately lighted. Place indirect lighting on each side which will light the entire mirror and not cast shadows. Besides this, you'll want a center ceiling fixture, with a special vapor-proof fixture in the shower stall if there is one.

That lovely new color scheme in your kitchen will lose all its attractiveness if the room is improperly lighted. There should be a ceiling fixture for general lighting, with some form of local lighting at the sink, range, and work surfaces under cabinets. In most modern kitchens lamp bulbs are recessed in the ceiling over the sink and range. Long, slender fluorescent lamp bulbs are ideal for use under cabinets to illuminate the work surfaces.

Kitchen

Good lighting is one of the first requirements for a successful kitchen. If possible, plan to have a light at every work center —the sink, range, and refrigerator. One light, well placed to eliminate glare and provide ample light, can usually be made to serve two centers.

The best lighting for a kitchen so far tested is a diffused light or one which is as nearly like daylight as possible. This is produced by an enclosed, semi-transparent unit placed near the ceiling to prevent shadows. In an average-size kitchen, a 100-watt bulb is usually sufficient, while a very large kitchen will need a stronger bulb.

Working counters may be properly lighted by bulbs concealed back under the cabinets which are above them. For homes unequipped with electricity, the new kerosene-burning and gasoline-pressure lamps are very successful. Attractively styled, non-leaking, they are built to give light where you need it. They, too, should be properly shaded and so placed with reflectors that the light will fall on the work surface rather than in the worker's eyes.

Reflected light should also be considered in planning improvements for the kitchen. For example, dark brown varnished walls and woodwork reflect approximately 19 percent of the light which reaches them and absorb about 81 percent. This means that dark walls are expensive since the bill for artificial light will be considerably greater than if the walls had more reflective power.

Bedrooms

A central ceiling light is often used in the bedroom and is thought by some to be most pleasing. Outlets for lamps are desirable so that a lamp can be used in any one part of the room. It is unnecessary for anyone to cross the bedroom in darkness if there is a lamp controlled at the bedside and other lamps or a ceiling fixture controlled at the doorway. This is an important precaution, since many injurious falls occur in the bedroom.

Pin-up lamps are convenient for reading in bed and for light at the dressing table.

Lights near a dressing table should be placed to throw light on the face of the person using the dressing table rather than on the mirror. Two lights, one on each side of the mirror, are usually better than one. These may contain 40- to 60-watt bulbs.

Basement

Stairway, laundry, storage area and all rooms in the basement should be adequately lighted to prevent accidents and should be adequate for the activity involved. Sometimes a reflector is needed to throw light on a work surface. An R. L. M. dome which has a smooth white interior is excellent for this purpose.

A light switch at the head of the stairs will control light in the main part of the basement. It is well to install a pilot light in the main part of the basement where it can be seen easily. If individual pull-chain sockets are used in the various parts of basement rooms and storage spaces, they should be provided with a safety link to eliminate shock hazard. Each room should have wall switches at the door so that it will not be necessary to cross the room in darkness.

Garage and Yard

It is well to have the light in the garage controlled by a switch in the house as well as in the garage. This is also true of a yard light which may need convenient switches at barns and other locations. The height of the yard light will depend upon the amount of spread needed. This type of light should be equipped with a dome reflector to direct the light on areas where illumination is desired.

If electricity has not yet reached your home, there's still no reason why your home cannot be well lighted. The fuel lamps of today are not the same models of 30 years ago, for with other strides in science, these, too, have improved. Well placed, and correctly fitted with reflectors and good shades, they will provide efficient light for your family's needs.

If you are uncertain of the quality of the lighting in your home, it's a good idea to borrow a light meter and check the amount of light at the most-used places with the correct candle power approved by lighting authorities. Your electrical dealer or electric company will be glad to lend you a light meter for your tests.

The table study lamp is designed to give an excellent light for ordinary reading. It is just the thing for the family that uses the dining table as a reading and study center. Note the height of the lamp that permits adequate light with neither glare nor shadows in the room

Only a woman who has cautiously felt her way up and down darkened basement steps knows the joy of a lighted entry, with a toggle switch that can be worked with a single finger. It's a safety measure, too

Ways With Windows

Good colors, smart fabrics, distinctive treatment, and lots of imagination are the things you need to have charming windows. They can be the best decorative feature of your home

← Even the dreariest kitchen would perk up with a window treated with curtains of white dotted net, with ruffles and bands of red calico. Of course, the potted geranium helps, too!

These handsome draperies cost exactly 15 cents a yard out of a mail-order catalog! They're of light gray lining material, made double width, with deep ruffles of dark burgundy; they are unlined

Draperies of crisp, colorful chintz are the making of this room. Curtains are of cream-colored net, and the chintz, with an eggshell ground, is patterned in deep reds, greens, blues, and yellows

WINDOW curtains and draperies created on a shoestring take twice the headwork, twice the footwork, and three times the imagination it takes to order the same "over the counter" with a lavish hand. They are also several times as much fun to create, and probably 100 percent more individual and interesting. And how much they cost has absolutely nothing to do with it. In fact, some of the most artistic window effects we've seen this season cost the least to achieve.

One in particular which impressed us was a charming French Provincial bedroom. The draperies were simple enough—but so "different"! Of cherry-red chintz, they had 10-inch ruffles of white chintz, and were hung straight down from under a plain wood cornice painted a rich green. Glass curtains under the draperies were plain white voile.

We know another clever homemaker who even had the bright inspiration to take two old white damask tablecloths she no longer used, split them, and make them into two pairs of dining-room swag draperies, with 12-inch ruffles of bright red chintz! We've also seen the same trick done with humble white muslin sheets, dressed up attractively with checked gingham ruffles.

Another "case history": A young friend, newly married and watching the pennies, made some handsome living-room draperies out of heavy cotton lining material that cost her 15 cents a yard from a mail-order catalog. She chose it in a light gray tone to blend with her rug, made her draperies the double width (72 inches), added deep, full ruffles of the same material in a rich burgundy color, and swooped them back dramatically on each side, using the burgundy material for tiebacks. Of course she made them herself, which one has to do if the undertaking is done on a small budget, for labor is one of the most costly factors in custom-made draperies.

Don't, whatever you do, go in for what I call "imitation" materials—would-be damasks woven of cotton in dull-colored and stuffy patterns; pseudo-satins that are too shiny to be true; hideous cotton velours. Use, instead, materials that are exactly what they are—cottons (chintzes, crashes, broadcloths, and such) and good-quality rayons—in colors and designs that are really smart.

Mull around in the cotton goods department of your favorite store and you'll find a lot of bright inspirations here, even for living-room draperies. Humble unbleached muslin, dipped just the right subtle shade to harmonize with your rug, can lend many times the distinction that a costly fabric in an indifferent color could give. Crisp gingham plaids, calicoes, printed percales, striped ticking, and dramatically figured dress prints can be bought for a song. And you'll be amazed, once you've whipped them up into draperies, at what original effects you can achieve with them.

Most draperies should hang to the floor, and glass curtains to the apron or window sill. Choose materials that are wide enough to hang in soft folds. For most windows, it will take a width and a half of 35-inch material, or one width of 50-inch for each curtain. For narrow windows 30-inch or 36-inch material can be used.

The most handsome curtains and draperies won't look attractive if hung over dull, dark window shades or blinds. In the old days they were bought for utility alone—but not so today, for they're ever so good-looking. Too, they've been brought down within the price range of all of us. If you've always wanted Venetian blinds but felt they were beyond your means, you needn't hesitate any longer. Smart ivory blinds can now be bought for less than two dollars for a medium-sized window. Contrasting tapes are available for a few cents more. The blinds are made of three-ply compressed chestnut fiber, are washable, and you can install them yourself.

If roller shades are still your favorite, you'll be delighted with all the new colors—soft blue, peach, rose, and yellow. There are double shades, too, a different color on each side, which give extra sun protection. For that drab kitchen window, why not use a gayly patterned shade with plain sheer curtains? The low cost of new window shades will allow you to change them more often.

Cleverly schemed, your windows can be the best decorative feature of your room. So in planning your draperies and curtains, remember that the four most important ingredients are: First, good colors (let them have lots of life and spirit, lots of "oomph"!); second, smart fabrics (even if it's 15 cents a yard it can be smart if you've put lots of thought upon its selection); third, distinctive treatment (by means of colorful edgings, valances, cornices, unusual ways of draping); fourth, imagination—lots of it—and don't be afraid of it!

Successful Farming has a booklet, "New Ideas in Making Curtains and Draperies," which will help you immensely in planning your window treatments. It is filled with smart, money-saving ideas for selection of material, directions, and color schemes. It costs only 10 cents. Address Successful Farming, 9337 Meredith Building, Des Moines, Iowa.

Furniture Face-Lifting

Old pieces take on new life under the paint brush, or you can try your decorating hand at refinishing worn furniture with varnish

Many an old chair can be restored to attractive usefulness with a new finish of paint. The surface should be thoroly cleaned, sandpapered smoothly, and a filler used, if necessary, before the paint or a quick-drying enamel is applied

DON'T banish that old chest to the attic; paint it! And that golden-oak chair you're about to throw away—save it and give it a new lease on life with a few coats of paint. Look around you for those pieces that are too good to throw away but too outdated to be proud of. These are the things you can rejuvenate with paint so they'll look as fresh as Spring herself.

A little remodeling, too, can help a mediocre piece toward its restoration. For example, we were faced recently with the problem of doing something about an old-fashioned bureau; you know the kind—six drawers high, bulky and awkward. It no longer conformed to the current standards of taste in decoration. But those six drawers! So much valuable space can't be discarded casually.

Problem: How to retain the storage space, yet create something well proportioned.

Solution: Saw the bureau in halves horizontally, making two units of three drawers each. One part requires a new top, the other, new legs. Then a couple of coats of paint and we have two nicely proportioned chests of drawers instead of one awkward bureau. These particular chests can be painted a dull blue-green. Instead of the commonplace drawer-pulls, use white cotton rope knotted thru brass screw eyes for each handle. Very pleasing!

Paint Is Smart

Painted furniture is by no means a recent fashion. On the contrary, it is one of the oldest forms of decoration. There still exist a few fine examples of painted Egyptian furniture and the museums are filled with the work of Dutch, Chinese, French, English, and Early American craftsmen. Many of the finest pieces were designed originally for salon and drawing-room, so don't be afraid to use painted pieces in any room where you feel they will help brighten the decorative scheme.

The worst bugaboo for the uninitiated is mixing colors. Of course, like everything else, it is comparatively simple when you know how. Prepared paint may be purchased in a great variety of colors but there are many times when the exact shade you want will have to be mixed.

The rules for mixing are simple. They consist chiefly in knowing what effect one color will have on another when mixed together. Colors are divided into two major groups: primary and secondary colors. The first are red, yellow, and blue, and are called primary because they cannot be obtained by mixing other colors.

Secondary colors are the results of mixing any two of the primaries. Red and yellow mixed give orange; blue and yellow, green; red and blue, violet or purple. Any of these colors, pure or mixed, is apt to be too intense for normal use so they must be toned down or neutralized to a point where they are pleasant to the eye and harmonious with the room scheme.

Neutralizing is accomplished on the average job by adding white to lighten or black to darken. But for a really distinguished color, any basic hue may be neutralized by the addition of its complement. Complements are those colors which are exactly opposite in all characteristics. Red, for example, is warm and aggressive while green, its complement, is cool and receding. Equal quantities of each would produce gray or a complete neutral. But a less amount of either one will merely tend to neutralize the predominating color. This is the method all artists and decorators use.

Usually, the best advice is to begin with a color as near the desired hue as possible; then add whatever is necessary to change its character. Say you want a dull blue-green. Begin with green and add enough blue to get the right color. This can then be lightened (white) or darkened (black) or toned down subtly with orange.

Concentrated pigment ground in oil, for tinting and neutralizing, can be purchased in tubes or small tins. This must be thinned with turpentine before adding to the prepared paint so that the two will blend more readily. Add small quantities at a time and stir constantly. Lacquers should be used as prepared by the manufacturer but flat finishes and enamels may be toned down as desired.

A bright and colorful kitchen with plenty of drawers and shelves for all the pots and pans, staple groceries, and the miscellany of bulky equipment every farm home needs may seem, at first thought, beyond average means.

But such a kitchen is within your reach. The answer? Homemade or ready-built, unfinished cabinet units to be painted by you.

You'll be surprised at their low prices (from $2.50 to $10), the many combinations in which these cabinets come. Even the "factory-finish" look, to say nothing of years of serviceability, can be had with a fine enamel finish and linoleum covering with metal edgings on worktable tops. The latter are sold especially for home-painted cabinets in most hardware stores.

A Good Job

In the kitchen there's grease, which in time can soften certain paint films, making them "tacky" and hard to wash. Moisture from steam, hard knocks, excessive heat, changing temperatures—all are bugaboos of paint life.

For a job that will look and wear well, first buy a good product of a well-known manufacturer; it will look better, last longer, and make an easier-to-wash surface. For the finishing coat, get an enamel intended for woodwork or furniture; and

← Bookshelves can be made at home or bought unfinished. Paint them a colorful tone to contrast or harmonize with the room's color scheme; or they can be stained or varnished as you choose

Learning together. Many a member of farm homemaking groups has furniture refinishing as her project. Below is shown such a class in Illinois ↓

flat paint or enamel undercoater for the first two coats, the latter according to the enamel-manufacturer's undercoat specifications.

Try one of the new enamels made on a synthetic resin base. It is claimed these enamels are the purest white to be had in a finish, and that the white does not yellow or gray with age. They are practically unaffected by grease, have an easy-to-wash, porcelain-like surface, and withstand many more washings than the old-type finish.

Prepared paints seldom need thinning, but do need thoro stirring to blend all ingredients. If thinning has to be done, turpentine and boiled linseed oil are the usual mediums. On this point, it is well to follow the manufacturer's directions to the letter. Let your dealer help you in choice of brand, for a cheap paint is never a bargain in any sense.

Brushes

Good brushes are important, too. They will give a more uniform finish, won't shed their bristles, will hold more paint and won't leak or spatter; and, with proper care, will outlive the working span of several cheap brushes.

For most paint work and for varnish, 2-inch brushes of badger or Chinese bristles are best. Lacquer requires a flowing brush of badger or oxhair; shellac, a bristle brush; Japan colors and all fine work such as trimming, a camel's hair brush. It is wise to keep one brush for varnish alone. New brushes will need to have dirt and loose bristles tapped out of them before using and, to be kept in good condition, should always be laid flat when not in use. Never allow paint to dry on them, for this ruins a brush quicker than anything else.

Always clean your brushes after each job, even when you stop for the night. Paint brushes should be cleaned in turpentine, varnish brushes in varnish-remover, shellac brushes in denatured alcohol, and lacquer brushes in lacquer thinner. When you have completed the job, clean each brush thoroly, wash with a mild soap in warm water, dry and comb out bristles, wrap in paper, and lay flat until needed again. When thru work for the day, cover paint cans, for if they are left open, the paint thickens and forms a scum on top.

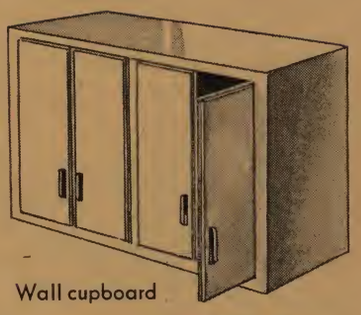
On old furniture where the finish is in bad repair, is cracked or blistered, varnish- or paint-remover should be used. Brush it on, allow to remain 15 minutes or so and scrape off the softened finish with a putty knife. A wire brush is good for removing finish from carving. If necessary, repeat the process and then clean thoroly with benzine (be careful of fire) to take away all remover.

Coarse-grained wood should have a coat of wood filler brushed on with the grain, allowed to stand 15 to 20 minutes, then wiped off with a coarse cloth across the grain. Allow the filler to dry 24 hours, then sand with No. 00 sandpaper and wipe free of all dust. As most wood is porous, a prime coat of shellac (or half shellac and half denatured alcohol) should be brushed on. If it is hard wood or the previous finish is in good condition, the primer is unnecessary.

Painted furniture in good condition may merely be washed with a solution of washing soda and allowed to dry before filling imperfections with wood filler and sanding. All varnished pieces must be thoroly sanded and shellacked before new paint may be applied, for paint acts as a remover when applied directly over varnish.

At least 2 and preferably 3 coats of paint are necessary for a good finish.

As to drying time, allow at least overnight, or, in damp weather, an extra day.



Wall cupboard

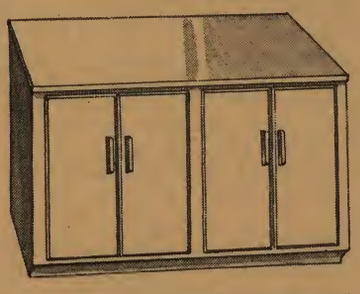
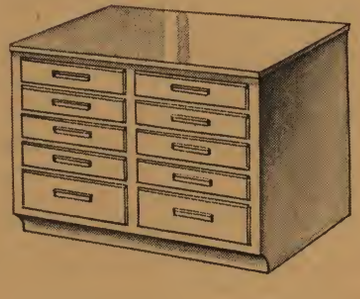
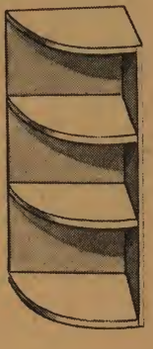


Table-top cupboard

Lower left: Unfinished drawers



To save steps, place table-top cabinet near rear door and refrigerator for storage of staple groceries, another at the food-preparation center near sink; and at range, more cabinets, both wall and base. Right: A corner-shelf unit



A full 24 hours' drying time is needed if you sandpaper lightly between coats, which is to be recommended for professional results. Sandpapering is especially worth while for worktable tops if you are not covering them with linoleum.

Paint the legs and arms of chairs and the legs of the tables first, the broad areas afterward. You will find it more convenient to turn these pieces upside down for leg painting. Also, it will be a back-saver to have all pieces raised up on boxes.

Brush strokes should be long and smooth, the paint being brushed out well. A smooth ground coat is the best assurance for a smooth finish. All drawers should be painted separately and allowed to dry before replacing. After the first and second coats, any roughness may be removed by a light sanding, and a final luster may be given the last coat by a rubbing of powdered rottenstone and water.

Flat paint and enamel are applied in the same manner except that great care must be exercised in applying enamel to flow it on rather than brush it in. Lacquer must be flowed on, never brushed in. Prepare the surface as for flat paint and have the brush as full of lacquer as possible without dripping. It evaporates rapidly so don't try to cover much ground at one stroke; make the laps quickly and keep the brush full. One coat of lacquer is often enough but two give a more lustrous finish. The second coat, however, must be brushed on rapidly so that it won't have time to soften and pick up the first coat. Lacquer always remains soft underneath the hard surface and should not be sanded.

Now a word or two on walls and woodwork. Remembering that paint applied over grease, dirt, dust, soap, or moisture will fail, be sure to wash the surface to be painted, rinse thoroly, and let dry thoroly —at least a day. Moisture is said to be the largest single cause of paint troubles. Ammonia and water is considered preferable to soap and water for washing because it is more easily rinsed. For parts in very bad condition, a commercial paint-cleanser is helpful.

A single new coat will do if the old finish is in fair condition and if you are not putting a lighter color over a darker one. Otherwise you will need two coats.

Don't hesitate to cover dark, drab-looking woodwork. It can be painted the same color as the walls or a shade darker. Where there is a special problem due to grease spots, resin, or the like a primer coat of aluminum paint is recommended.

For walls, use only a wall paint. You will find that the type made with titanium pigment (there are a number of these on the market) hides better, sometimes covering in one coat where two coats would otherwise be needed. A flat paint is more pleasing in appearance, but a semi-gloss paint washes better and is to be recommended for kitchens.

Antique finishes are popular, especially for white. To antique, apply a thin, semi-transparent coat of raw or burnt umber mixed with boiled linseed oil and turpentine, then with soft rags wipe off all excess paint until you have the antique tone you prefer.

An eggshell finish is made by thoroly rubbing the surface with powdered pumice and paraffin oil and wiping clean to remove all traces. An ebony finish is fine for certain pieces, and is made by first applying a coat of varnish. A little Chinese blue mixed into the black will give it that ebony tone.

The variety of color combinations for painted pieces is unlimited and depends upon individual taste for its distinction. You can do a little striping if you have a sure hand, or get an added effect with decalcomanias or wallpaper cutouts. You'll do well to avoid the so-called summer-cottage color combinations and to think more in terms of soft tones which will fit into your present scheme. Don't be afraid to mix them and to neutralize them for subtle shades.

If refinished properly, the oldest piece of furniture can become a prized heirloom as well as an attractive and useful part of a room. A slip-cover is being fitted here

Varnish Finish

First of all, is the piece to be refinished still solid in construction? Are the glued joints still firm? If not, take them apart, remove the old glue and apply a good grade of glue. (There's an easy-to-mix powdered casein glue on the market that is highly recommended.) Clamp together and let the piece stand for at least three hours before any further work is done. When all repairs have been made, remove all drawers, knobs, old hardware, and other accessories.

Never use lye water, for it will ruin the wood surface. Either scrape off the old finish or use a commercial remover. Scraping is tedious and must be done carefully so that no bits of wood are gouged out. Use a regular varnish scraper or dull putty knife. Hold at an angle and scrape with the grain, using steady, even strokes.

Commerical remover should be shaken well before using. Apply a heavy coat with a bristle varnish brush; do not brush any more than is necessary to cover the piece. Allow this to set until the old finish is soft and then scrape off with a putty knife. Often it is necessary to apply two coats, especially with very old varnish or paint. After the old finish has been thoroly removed, clean off any residue left by the remover.

Allow the piece to dry thoroly before sanding. If the wood is rough, sand well with 2/0 garnet finishing paper and finish up with 3/0 paper. Use a sand block made of soft wood, cork, or rubber for this purpose, and always sand in the direction of the grain of the wood.

If there are dark stains you wish to remove, bleach with a solution of 1 teaspoon oxalic acid crystals to 1 pint warm water. Rub the stains with a soft cloth and after a few hours wash the spots thoroly to remove all the traces of the acid. Smooth.

Stain. If you wish to change the natural wood color, use a stain. Oil stains give more uniform results on old wood. Apply the stain with a 2-inch brush, covering the surface evenly. When the surface presents a dull appearance, wipe off the surplus stain with a clean cloth, keeping the shade uniform. Since stain penetrates soft woods more rapidly than hard woods, leave it on soft woods for a shorter time. Oil stains should be allowed to dry for at least 24 hours. They should be thinned down with turpentine and care should be used not to get the stain too dark as succeeding coats of varnish will change the color somewhat. Oil stains should never be used under a lacquer finish.

Wax. With a cloth apply paste wax generously, using a circular motion, and then rub with the grain of the wood. After the wax has set for a short time, start the polishing process with a soft woolen cloth. For a good luster it will be necessary to give at least two coats and possibly more, depending on how much is absorbed by the wood. The first waxing is the most difficult—taking the most rubbing. At least 24 hours should elapse between applications.

Varnish. Always varnish in a warm room —the warmer, the better; the varnish and the piece to be varnished should be at the same temperature. When the first coat is dry, sand with 5/0 garnet finishing paper, always sanding with the grain, by hand, without the use of the sand block. Dust the surface thoroly and wipe off with a tack rag before applying the second coat. (A tack rag is a piece of cheesecloth saturated slightly with turpentine; it will pick up most of the dust particles after sanding.) A good varnish should be selected for the third coat.

Varnishing Technique. Apply with a 2-inch flowing brush or a good bristle varnish brush. Fill the brush about half full of varnish, wiping off the excess on the edge of the container. Apply to the surface, brushing back and forth with the grain of the wood and covering the surface evenly. Then, with very little varnish on the brush, brush back and forth across the grain, removing all excess varnish picked up on the side of the container. Brush lightly again with the grain. Look over your work carefully to see that there are no runs or sags on the edges. If there are, they should be brushed out immediately. Varnish dries slowly and you will have plenty of time to look over your work for defects. When dry, sand by hand with 5/0 or 6/0 finishing paper. Dust thoroly and wipe off with the tack rag. One coat of varnish does not make a satisfactory finish. Two coats are much better and if you wish a rubbed finish, use three coats of good-quality varnish to obtain that high gloss.

Enamel. A satisfactory enamel finish consists of two coats of undercoat, tinted to approach the shade of enamel to be used, and two coats of enamel. A good grade of four-hour enamel will be found very satisfactory. See that the piece to be finished is well dusted before applying the first coat of undercoat. When dry, sand this coat with 5/0 finishing paper. Dust again and wipe carefully with the tack rag. Apply a second coat of undercoat. When dry, sand again and clean off carefully with duster and tack rag. Apply the second coat of enamel and when dry, this coat can be rubbed to a satin finish with pumice.

Farm Service Buildings

Efficiency the Watchword

FARMERS who have made their buildings earn what they cost, and more, say you've got to build and repair structures just as you would feeder steers or brood sows—on the basis of the income they will produce.

One farmer we know owns a grain bin which has paid for itself twice over in the two years since he bought it. The bin holds 1,000 bushels. The farmer stored 700 bushels of 1938 oats which rose in price from 16 cents a bushel at harvest time to 25 cents the next spring, when he sold them. In 1939 he stored 400 bushels of oats from July to October for a gain of 15 cents a bushel. In November that year he put in 1,000 bushels of shelled corn—then selling around 35 cents. When he sold the corn in the spring he got 55 cents. This farmer figures his bin has earned at least $300 in two years. It cost only $150. He was lucky, of course, in being able to capitalize on unusually large seasonal rises in prices.

Farm income has been improving in recent years, and many farmers have been looking around for ways to invest surplus cash. A good many will buy additional land to expand operations. In many cases the farmer would be better off to improve operating efficiency of his present farm. Most Midwestern farmers could profitably invest in buildings—either new or remodeled.

In any farm building program, a point now stressed is the importance of *use value* as well as the *cost* of buildings. The two are often not even closely related. Because $1,000 is spent on a hog house does not mean that the new hog house is worth that to the farm, particularly if ample hog-housing already exists there. Many farmers say an important rule to follow in putting up new or remodeling old farm buildings is to make them fit the *long-time needs* of the farm. In the Cornbelt that may often mean that the buildings should suit several different purposes. Noteworthy developments have recently been offered in outline buildings—that is, buildings with permanent exteriors but flexible interiors.

In order that a building be worth what it costs, it is important not only to build it to fit specific purposes but also to keep the cost low. After you have decided on the need for a new dairy barn or a new poultry house, the important thing is to get what you need at the lowest possible outlay of cash.

Many of the agricultural colleges have building-plan services that are available free to farmers, showing the total cost of different buildings based on average prices, and also the unit cost per square foot and per cubic foot. A poultry house is listed in an Iowa State College service at 9½ cents per cubic foot, while a machinery shed and shop can be put up for 4½ cents. The cost of an ordinary pole barn is figured at 3½ cents per cubic foot and a general-purpose barn or a dairy barn at 6 cents per cubic foot.

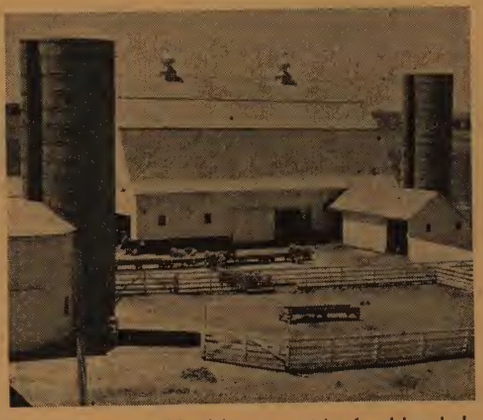
How much investment, then, should a farmer have in buildings? The answer depends a lot on the size and type of farm, of course. Every farmer must answer that question for his own particular conditions. However, a study at the University of Missouri shows that the average investment in buildings (not including the home) was $17.37 per acre for general farms in Missouri. For dairy-hog farms the investment averaged $24; for straight hog farms, $16.30; and for beef-hog farms, $21.20.

It was also found that the annual cost of service buildings made up about 6 percent of the total cost of production on the most profitable farms in the group studied.

ANOTHER study made at Iowa State College showed that the best Iowa farms averaged around $2 per acre per year building costs (including home and all improvements). Costs ranged from $16.60 per acre on the 80-acre farms to $3.25 on farms of 400 acres or more. The quarter-section farms averaged $2.10.

The dollar return from buildings, however, is not the only test of value. Some farm families may get enough enjoyment out of fancy buildings to offset the extra cost. If the farmer sells the farm, tho, he cannot expect buildings to have the same value to the new owner as they did to him.

Monuments to the folly of overbuilding are a common sight on many Midwestern roads. Many of these monuments were raised during the 1914-1918 war period when farm prices boomed and farmers grew careless with the extra income. In future building and improvement, let's stick to well-planned buildings in keeping with the long-time earning power of the farms on which they are located.

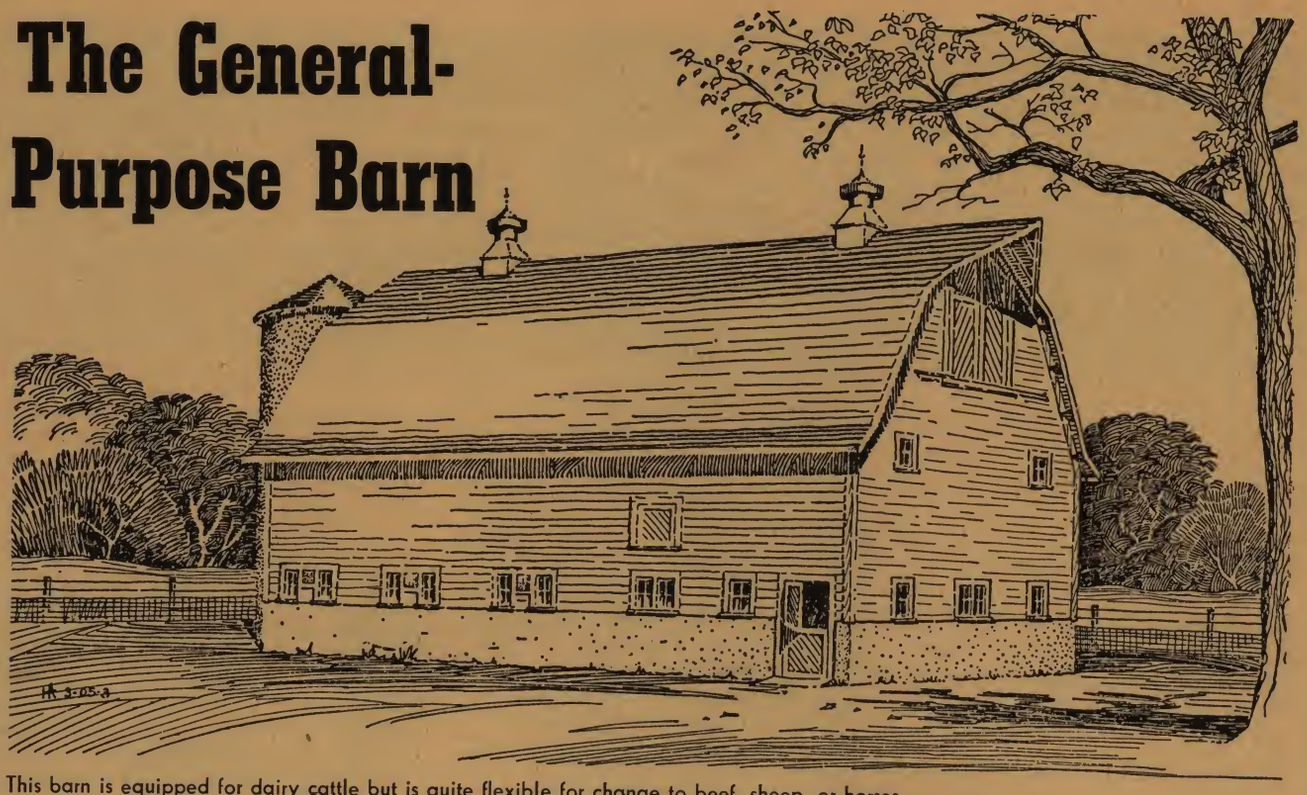


This placement of buildings provides feed-lot shelter, and the land is well drained. Note efficient location of feed-storage units in relation to lot

No beauty is the trench silo, but a practical answer to forage supplies for the temporary production emergency. This is masonry lined, cuts spoilage

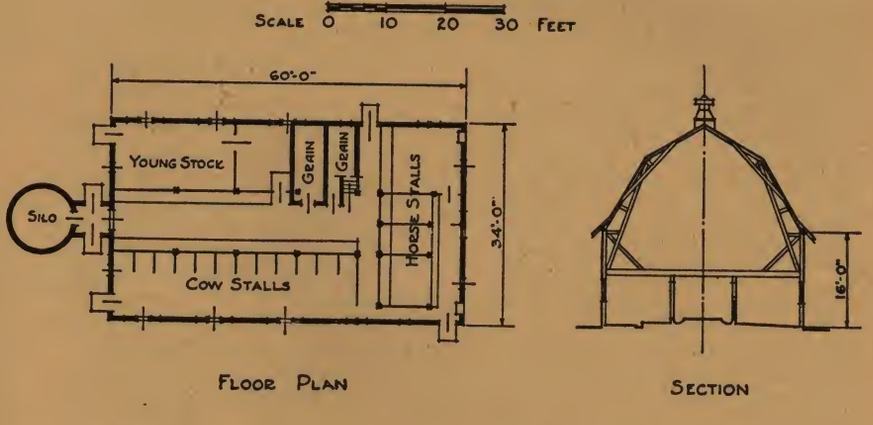
The old theory that sheep thrive best in snowdrifts is being disproved by better yields from sheltered flocks. Buildings for sheep need not be fancy

The General-Purpose Barn



This barn is equipped for dairy cattle but is quite flexible for change to beef, sheep, or horses

Plan carefully and keep in mind the need for flexibility in this type of building



FLOOR PLAN SECTION

THE two-story barn of rectangular shape is a product of many years' experience. While subject to some definite shortcomings, it has an advantage in labor-saving and economy that is likely to last.

Because it will stand for perhaps three or four generations, the location of the barn is an exceedingly important factor. Natural drainage is usually a first consideration. Unless the water drains naturally away from it in all directions, some artificial provision is necessary. For drainage within the barn, the concrete floor is elevated enough so that it is well above the ground level at all entrances.

In northern regions a location which permits the construction of a basement barn is often used to provide protection from extreme cold on one side at least.

The barn presented here has been a popular one thruout the country for generations.

Its size, of course, is determined by the number of animals to be housed. Where one row of animals of average size is placed lengthwise in the barn, it occupies, with mangers, curbs, platforms, gutters, and feed alleys just 17 feet, or half of a barn 34 feet wide. Unless rigid economy is necessary, it is advisable to make the width of the barn 36 feet. This provides better opportunity for the use of feed trucks in the alleys. The size and number of animals determine the length of the barn. A general rule is to allow a stanchion width of 3′ 4″ for each cow. If they are large, it is better to allow 3′ 6″ per cow. Platform lengths under the cows should vary slightly to accommodate heifers and more mature animals. For Jerseys, platform length should be between 4′ 4″ and 4′ 7″; for Ayrshires and Guernseys, 4′ 6″ to 4′ 10″; for Holsteins, 4′ 10″ to 5′ 6″. A crowded barn is always a nuisance, but an over-large barn is unnecessarily expensive, and heat loss may be so great it cannot be kept warm in cold weather. Animal heat units are the deciding factors.

Economy of space is obtained and labor reduced when cows are arranged in rows lengthwise of the barn, with pens for calves and bulls and maternity stalls at one end.

A recent development which adds flexibility to the barn consists of partitioning off a small section to be used for milking purposes, leaving the rest for a loafing shed. Thus, for 20 cows, milking space would be provided for only 4 at a time. The balance of the barn would be kept well bedded and the cows turned loose in it. Hay and silage are usually fed in bunks in the loafing shed.

RAPIDLY changing conditions in agriculture have produced a demand for interior arrangements of barns that are flexible. If a farm changes hands, the new operator may wish to change from beef cattle to sheep, or possibly to dairy cattle.

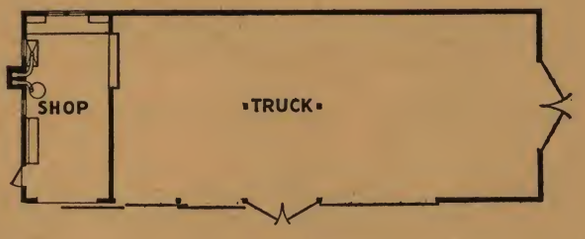
The barn presented here is now equipped for dairy cattle, but is quite flexible. In building, try to fit the structure to the probable long-time requirements of your farming program.

Machine Shop and Storage

This combined shop and storage shed is planned for year-around care of valuable equipment, is low in construction cost

Handy Storage • Power Equipment

Work Space • All-machine Size



THE complete farm shop must meet 4 requirements. The first requirement is that it provide convenient storage for all shop tools and supplies. A tool that has a place can always be found and will be in serviceable condition for a lifetime if given ordinary care. The plans provide ample shelf, drawer, and rack space for all shop tools. They also provide ample space for the convenient storage of bolts, nails, screws, staples, washers, pipe fittings, paints, sheet iron, rods, strap iron, and lumber. A few hundred feet of rough-sawed oak lumber stored overhead in the machinery shed will save many expensive purchases and trips to town for eveners, tongues, axles, and numerous other repair parts.

The second requirement is that the shop provide a well-lighted, comfortable place to work. This is important because much of the shopwork can be done during the winter and at times when the weather is unfavorable for outside work. Ample window area is provided for good daytime lighting, and electric lights will prove valuable if they are available. Provisions have been made for a safe chimney so a heater may be used. This chimney has a second flue for the forge to insure a good draught and to give the building an attractive appearance.

The third shop requirement is that sufficient space be provided so almost any machine can be taken in for repairs or servicing. The size of shop shown here will accommodate most machines, the auto, and the tractor.

The fourth requirement is new and will do much to popularize the shop on any farm. This is the need for power equipment. The blacksmith is becoming hard to find in many localities. We find traveling blacksmiths and farmers themselves shoeing horses on the farm. By having a forge, anvil, welding equipment, power drill, grinder, saw, and other smaller power tools, much more work can be done in the shop, and it will become a more interesting place to work. With electrification now available on many farms, shop-sized machines are becoming more popular and their prices have been reduced. The farm shop offers an opportunity for electricity to be used where it can save the cost of the electric bill year after year.

The farm shop shown here meets all of the requirements and is designed to take up a very small amount of space. The farm shop is at one end; at the other end a 12- by 12-foot door provides access for hay-loaders, a truck with rack, or other wide or high machines. In the front and center, a door 10 by 12 feet is provided for larger equipment and is suited to the small threshing machines and truck storage. If combines, 4-row corn plows, 2-row corn-pickers, and other wide machines must be housed, this door width may be increased to as much as 14 feet and still remain 12 feet high. The width of the shed is an economical and convenient size, with doors along the front and at one end. If desired, additional doors may be provided along the rear.

A concrete floor is desirable, but if an effort is made to block up machines such as disks, harrows, and plows, an earth floor will be satisfactory. This floor should have at least a 6-inch fill so rains and water from melting snow will not run in.

The housing of farm machinery is always a sign of thrift and good management on the Cornbelt and Dairyland farm. The machinery shed shown here is designed to meet the various requirements of the average farm, altho the length may be increased or decreased if necessary. One thing is certain: Anyone building the machinery shed will do well to include the shop, and his work will profit by it.

● Blueprints and lists of materials for the machine shop and storage building described above may be obtained from Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa. Send 50 cents to cover printing, mailing, and handling costs.

Concrete floors and modern disinfectants have made the central hog house popular for early litters of strong pigs

Hog Houses

A choice of two systems representing widely different problems is offered

SUCCESSFUL swine-raisers fall generally into two groups on the subject of housing. The first, and by far the most numerous, now depends upon a battery of small colony houses which permits the sows and their litters to spend most of the summer in the fields away from parasites and disease. These small colony houses are readily pulled up to the other buildings to simplify chores in cold weather and to enjoy protection from large buildings. The system, developed in Illinois, has been known as the McLean County Sanitation Plan.

The second group of swine-raisers depends upon central hog houses, frequently heated to permit the raising of very early litters, usually for breeding purposes. For a long time in disfavor because of sanitation difficulties, the central hog house is now coming back again thru the discovery of simpler cleanup methods and because it materially reduces the work of caring for hogs. A leading Iowa hog-raiser who has made a remarkable record for low cost of production does not permit his hogs away from the central house from the time they are born. Concrete floors and pens make a strict system of sanitation simpler, he believes, than where his animals are scattered over considerable territory. Modern disinfectant applied with power sprayers copes successfully with both disease and parasites.

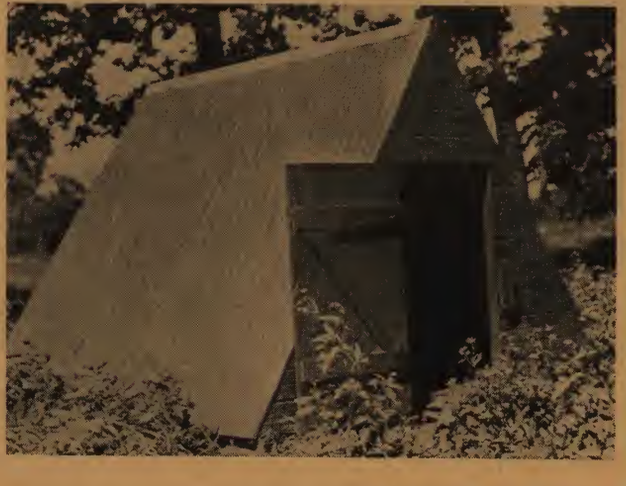
In planning your farmstead, you are therefore free to choose between the two systems. The central house represents a very heavy investment, but when built correctly its annual cost may fall reasonably close to the less expensive and shorter-lived structures.

When the choice falls on the community house, much more care in planning and construction, as well as in selection of materials, is necessary. Locate the house away from other buildings and prevailing winds to avoid objectionable odors. Nearness to cribs, pastures, and feeding yards must be considered, however. Natural drainage is more important than it sounds because a house located in a wet spot always proves unsatisfactory.

A house of this type is best built to accommodate 2 rows of pens, with an alley between. The average pen is 8 feet long and the alley 4 or 8 feet wide. The width of house will vary from 20 to 26 feet. In the wider house where alley is also used as a driveway, it is possible to convert the otherwise wasted space into a feeding floor or temporary farrowing pens. The length of the house depends entirely upon the number of hogs. Ordinarily a feed and storeroom are wanted. Thus the common length ranges from 30 to 60 feet, with 8 to 20 farrowing pens. The most popular pen is 6 by 8 feet.

The foundation should extend to firm soil below frost line, if possible. The best floors are made of 4 inches of concrete, or of hollow tile covered with ¾ inch of a concrete surfacing.

Above: A portable colony house which, when insulated and placed to catch sunlight thru upper door and window, should prove practical. Below: the old McLean favorite. Crude oil or used crankcase oil mixed with red ochre paints protects it



For plusses in production and sanitation thruout Midwest swine territory

Successful Farming's Low-Cost Hog House

THRIFTY Cornbelt farmers will find this economical hog house meets the exacting requirements for successful housing of hogs in every respect. The low-cost feature is of extreme importance because many hog growers follow a sanitation program that calls for individual hog houses in addition to the central unit.

It fits well in any hog program, with thoro insulation and ventilation features that provide ideal early farrowing conditions, comfortable housing for late-fall pigs, as well as suitable quarters for fattening hogs or brood sows.

The monitor type of building was chosen because it is simple to build, yet is strong enough to withstand wind and snow loads.

The pens were laid out with ample height for the hogs, and with 6 feet of headroom in the fore part of the pens for ease in feeding and cleaning. A feed alley with dry, clean floor, good light, and plenty of ventilation were the next requirements.

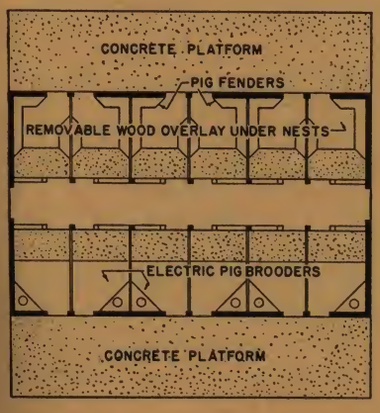
Choose a location on a well-drained site with easy access to feed lots and pasture, yet conveniently located to other buildings on the farmstead. The monitor house must be built with its long axis north and south, so the morning sun will shine in the west pens and the afternoon sun in the east pens.

The foundation is most important; the footing depth will depend upon the frost depth next to the building, which is usually safely taken as 3 feet. The frame is economical and strong. Studding and rafters are of 2-by-4 material, while the posts along the feed alley are 4 by 4's, exactly 9 feet, 6 inches long. The side-wall studdings are only 2 feet, 3 inches long.

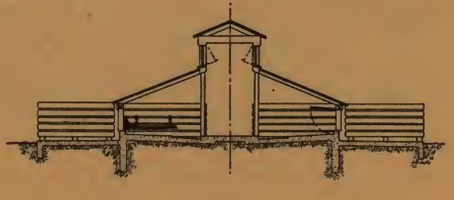
Ventilation is provided by top draft thru the windows, which should be equipped as shown with hinges at the top. Opening adjustments can be easily made by means of a rope and pulley with a locking device. The windows should fit well; perhaps weatherstripping would be advisable so they would not fit too snugly to open if the sash should become moist. To keep the house dry, some windows must be open at all times the house is in service.

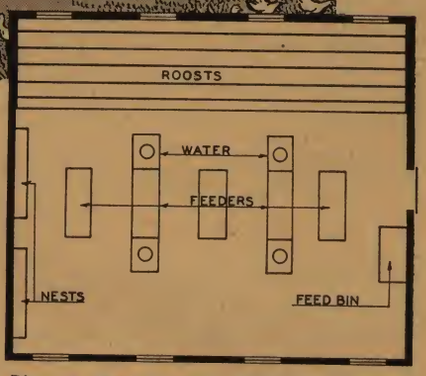
The pens are shown with wood overlays under the nests for the comfort of pigs. These overlays will give the best results if they are built-in panels and are locked in place by the partitions. The partitions on each side are easily removed to make larger pens for farrowing or other purposes. If pig-brooders are to be used, a convenient outlet and light with pull chain should be located over each pair of pens. For farrowing during cold weather, a pig-brooder, heated with a 150- or 200-watt electric bulb and reflector, will keep the pigs comfortable, while the house may be kept ventilated without danger from low temperatures or drafts.

Considering low cost and high serviceability, we believe this house will give the pork-producer a generous return for whatever materials and time are necessary.



Dimensions and construction details of the floor plan and elevation at left and below may be had with complete blueprints and a list of materials required, by writing Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa, and enclosing 25 cents in either coin or stamps to cover printing and mailing costs on plans and lists.

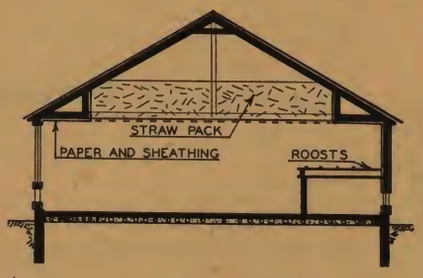




Plan 2 (26′ x 30′), showing equipment

A New Laying House

Designed especially for our Successful Farming readers



A cross section of either Plan 1 or Plan 2

GOOD poultry housing need not be expensive; the plans shown here provide satisfactory housing at low cost, and cost may be further reduced by using local materials and farm labor in construction. The plans may also be used as a guide in remodeling old barns, sheds, granaries, and other unused buildings into good single- or multiple-story laying houses.

The 20′ x 20′ house (Plan 1) has a capacity of 100 birds of the heavy breeds and up to 150 of the light breeds. The 26′ x 30′ house (Plan 2) has a capacity of 200 birds of the heavy breeds and up to 300 of the light breeds. Either house may be lengthened, and the 26′ house may be raised for additional stories if future expansion makes this necessary.

A brief description is given here to cover some of the points that could not be shown in the cuts on this page: The foundation is 8″ wide, extends from 12″ above grade to below frost level. Anchor bolts are used for protection against windstorm damage. The floor construction used is concrete on a 5″ sand or gravel fill. In climates with cold winters a dry floor is most desirable, and this is obtained by ventilation at all times and by waterproofing the floor. The floor is easily waterproofed by placing enough concrete over the gravel so it can be leveled off. After this subfloor has hardened, a layer of melted road asphalt or a layer of 2-ply roofing paper, with joints lapped and sealed, is applied. Three inches of concrete over the waterproofing is struck off with a straight-edge and finished with a wood float.

A THOROLY insulated wall is an important feature. Drop siding is applied directly to the studding, either with or without building paper under it.

The inside of the house is lined with shiplap, matched boards, galvanized sheet iron, or insulation board covered with plaster. This lining is placed over waterproof paper in the colder climates. Such a moisture barrier, or vapor-proo paper, prevents the moisture on the warm interior from condensing in the fill insulation of shavings or similar material.

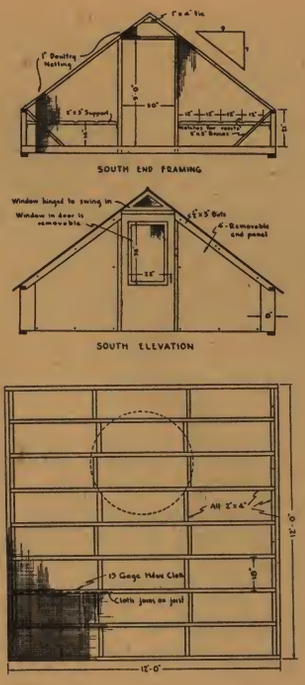
The straw loft provides an inexpensive method of ventilation as well as effective ceiling insulation. Fresh air enters thru the windows, and the warm, moist air works up thru the straw pack.

IF FOR any reason one should wish to install a ventilation system other than the straw loft, this can be done. In this case be sure to insulate the ceiling with 4″ to 8″ of good fill insulation thruout.

Cleanliness in the poultry house must be your watchword if you are to prevent those costly outbreaks of disease and parasites common to poultry. Its achievement will be simple if house, fixtures, and appliances are built with ease of cleaning and disinfection constantly in mind. Movable equipment makes a more thoro cleanup possible. With so many practical, inexpensive devices on the market today, the poultryman should have no difficulty in making a choice.

While these plans have been prepared for the climates having cold winter weather, they may be adapted to warmer climates by providing more window or screened openings.

● Blueprints and lists of materials may be had for either Plan 1 or Plan 2 by writing Service Building Editor, 9337 Meredith Publishing Company, Des Moines, Iowa, and enclosing 25 cents to cover printing and mailing costs. Be sure to ask for "Successful Farming's New Laying House" and also specify either Plan 1 or Plan 2 on your order.



This building will accommodate 300 chicks to 8 weeks of age. Right, elevation and floor plan

Combined Brooder House and Range Shelter

A LOW-COST poultry brooder house with a dual personality is a new development at the Kansas Agricultural Experiment Station. Constructed with removable panels in the ends, the gable-roof building serves as a summer range shelter after the brooding season is past. A farmer can construct one of these twin-purpose structures at a cost of about half that of a conventional brooder house, and have the same results as obtained by using both a brooder house and a range shelter unit.

The building is 12 feet square and 6½ feet high, large enough to care for 300 chickens to 8 weeks of age or 100 turkey poults. It is patterned after an idea originated by W. W. Neel of Polk County, Missouri. The framework, except the sills and floor joists, is made out of 2 by 3's. The roof and side walls are ¼-inch waterproofed ply-board. Hardboard would be equally effective. The floor is 15-gauge hardware cloth with a ¾-inch mesh over 2 by 4's.

During the first 4 weeks of brooding, that portion of the floor under and around the brooder is covered with muslin and straw so that the feet of the young chickens will not drop thru the mesh.

To transform the building into a range shelter, it is merely necessary to remove the brooder unit, remove those board panels covering the ends of the building, store them under the roof, and install roost poles on the supports.

In the transformation, the front panels are removed first and some time is allowed to get the young birds acclimated to the open before other panels are removed.

To reduce the cost of construction, it is possible to omit the hardware-cloth floor and the framework supporting it—using a gravel floor instead. L. F. Payne, head of the Poultry Department of Kansas State College, estimates that this would cut about $15 from the bill of materials.

Payne believes that these low-cost buildings will quickly find a place on numerous Midwest farms where the importance of sanitation in pullet production is recognized but where farmers have been hesitant to invest in both a brooder house and a range shelter. New production demands and the movement for greater efficiency make this housing method of timely interest.

New Low-Cost Poultry Houses

LOW cost is the outstanding feature of a line of poultry buildings being developed at Michigan State College. Based on use of plywood or insulation board over laminated rafters, they cut material bills in half.

The 24- by 24-foot laying house, housing 150 to 175 birds, is built with a base of two 14-foot, 4- by 4-inch runners, 6 feet apart, laid crosswise. A 2- by 4-inch wear-plate is spiked to the bottom of each runner to act as a replaceable shoe. Next, ten 2- by 4-inch joists, spaced 16 inches to center, are spiked across the runners, 2 feet in from each end. A floor of 1- by 6-inch tongue-and-groove flooring is put down, painted with creosote wood preservative, and the base is ready. (A smaller edition of the house—10 by 12 feet—makes an ideal brooder house.)

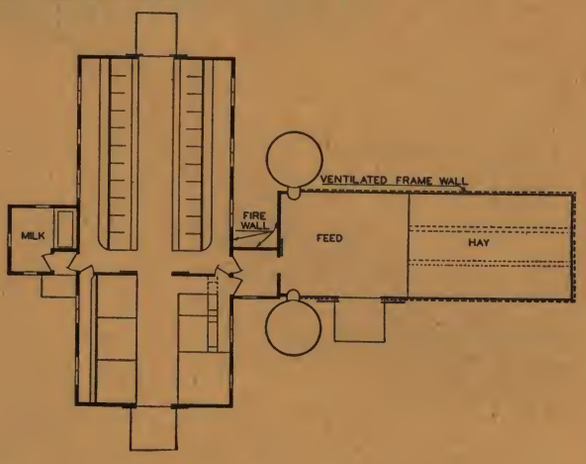
This 24- by 24-foot laying house covers 150 birds cheaply, snugly under insulation board

Laminated rafters, toe-nailed at the base and coupled at the peak by a 2- by 4-inch ridgeboard, are set 2 feet apart to allow jointing of standard 4-foot sheets of insulation board or plywood. Studdings with cross-headers to allow for a door, windows, chick outlet, and ventilation openings are fitted into the end frames.

Insulation board or plywood is nailed directly to the rafters. Twelve-foot lengths reach from sill to ridge. All points of union are made watertight by first coating with asphalt roofing paint, laying a strip of muslin over the joint in the tacky paint, and coating again with another application of paint. Then the entire exterior is gone over with one coat of asphalt. A galvanized ridge-roll will complete the job.

One-Story Dairy Barn Unit

Storage facilities, convenience, and fire-resistance are combined; chore time reduced to the minimum; and cost is reasonable



THE popularity of the one-story dairy barn has spread rapidly. The principal reason has been the fire-resistance possible in such a structure, kept free from large masses of hay and other inflammable material. Wind damage also is greatly reduced when the hay storage is provided elsewhere. The introduction of silo-like haykeepers in which chopped roughage is successfully stored has eliminated the need for extensive mow space for loose hay. Now the practice of storing a part of the legumes and grasses as silage has further concentrated storage space and increased the convenience of supplying roughage to the cows. Futhermore, the increasing use of field balers to collect straw from the combine, or alfalfa from the swath, has reduced storage-space needs.

Unfortunately, there is a lack of organization between livestock and storage facilities in most one-story barns. To remedy this weakness the building is now done as a unit which includes structures for loose hay storage, grain, a silo for corn, and a silo for legumes. A convenient milkhouse may be attached or not, according to the sanitary requirements of the territory. Such an arrangement reduces chore time to the minimum, provides safe storage, comfortable housing, and good sanitation. Furthermore, it can be built at a price comparable to the common two-story type barn.

The feed- and hay-storage structure is simply an enclosed hay shed, one end of which is used for the storage and preparation of concentrates. Grain bins may be located above. Quite frequently the old barn is remodeled and serves in this capacity. The sides have two offsets to provide ample ventilation for chopped-hay storage. Two ventilated partitions thru the hay-storage section run from floor to plate level.

This one-story barn is of masonry construction, with a wood-frame roof covered with incombustible material. Thoro insulation against heat in summer and heat losses in winter is provided between the ceiling joists.

While the windows should be of the type providing draft-free ventilation, in the more severe climates electric or gravity ventilation will be desirable. Some dairymen go so far as to use forced-air ventilation and artificial heat. Other dairymen have kept their ventilation costs down by installing one intake for each three or four cows and a single electric ventilation fan. This will keep the barn dry in cold weather, and if the barn is insulated sufficiently it will not cool the barn too much even in severe weather.

The milkhouse as shown is equipped with an insulated cooling tank. This would be optional with a commercial milk-cooling cabinet. It will be noted that the milkhouse is connected onto the barn with passage thru an open vestibule. A milkhouse convenient to the barn will save many steps. However, to save yourself possible later trouble, obtain the approval of local milk inspectors before locating a milkhouse next to the barn.

Plans are available at 50 cents for this newtype dairy unit thru the Successful Farming Plan Service. Simply send your order to Successful Farming, 9337 Meredith Building, Des Moines, Iowa.

Attractive as well as practical

A New Milkhouse

Designed especially for Successful Farming readers who are marketing milk or cream from a medium-sized herd

WITH careful planning and an eye for beauty in even the simplest of farm structures, Architect Witzel has produced an exceptionally practical and attractive milkhouse. While it is designed especially for the medium-sized dairy farm which markets either whole milk or cream, its 10-by-12-foot construction can be altered easily for larger dairies or where a 2-room milkhouse is required by local ordinance.

The foundation and floor should have good-quality concrete. For a dense, hard floor that is not too slippery, finish with a wood float. Where a considerable amount of milk is handled in heavy cans, it is often necessary to set into the cement a special steel mesh to prevent undue wearing.

Masonry units of lightweight concrete, clay tile, stone, and brick, are among the wall materials which may be used. In northern areas, a wall of good insulation qualities is necessary; lightweight concrete blocks with air spaces filled with insulation are being used successfully in many colder areas.

Metal window frames are desirable, and tight-fitting screens for summer use should be built. It is preferable to have the screen door open in and the main door open out.

A wood-frame roof is economical and practical, and, if desired, it may be covered with incombustible roofing. Ventilation thru the attic will keep the house cool in the summer. A regulation screened ventilator with 100 square inches of outtake area is required to remove odors and steam from near the ceiling of the room below.

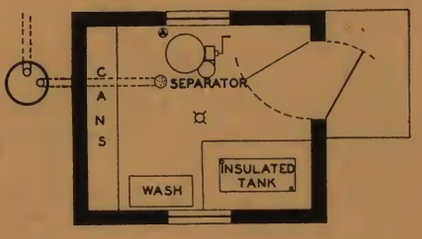
Should you buy an electric cooling unit complete with tank, or construct an insulated concrete tank, it is important in either case to place it so as to provide easy access. With a metal cooling tank, rusting may take place rapidly if it is set into the floor. The life of any tank will be lengthened materially if cans are handled with a block and tackle. A common sliding door track, 6 by 8 feet long, attached to the ceiling of the milkhouse, and a ball-bearing door-hanger will serve very well. Cans may be raised and lowered with a common barbed-wire stretcher suspended from the door-hanger.

INSULATED cooling tanks are practical and should be used where milk is to be cooled with cold water. When such tanks are used for cooling with ice or refrigeration coils, they must be a standard width of 40 inches. For water cooling of milk, tanks may be narrower to save water, but they still need insulation for best results. Milk once cooled in an insulated tank will remain cool, and in cold weather will not freeze.

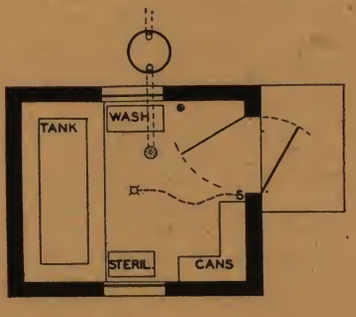
Locate your milkhouse on a well-drained site on the clean side of the barn; surround it with a lawn, shrubs, and flowers; and service it with a concrete or gravel walk and drive. In some fluid-milk territories, all milk must be strained in the milkhouse, so by placing it close to the barn and convenient to an outside door, travel can be reduced to a minimum. However, there should be no direct connection from the barn to the milkhouse unless the state permits it.

On farms passed by major highways, a more elaborate milkhouse may prove to be a good investment. The advertising value of an attractive place for the display of dairy products has been fully demonstrated. City people enjoy getting out in the country, and if the farmer makes it convenient for them to stop, it is possible to build an attractive trade of this class. Before putting additional money into the more elaborate house, a careful check on highway traffic should be made, and, if possible, a study of farms where some degree of success in this method of selling has been achieved.

● Construction blueprints and detailed floor plans for the Successful Farming milkhouse may be obtained by writing Successful Farming's Building Editor, 9337 Meredith Building, Des Moines, Iowa, and enclosing 25 cents in either coin or stamps to cover printing and mailing costs. Be sure to specify Successful Farming's New Milkhouse plans.



Floor plan for cream-separating



Floor plan for electric cooling

Floor plan for water cooling

Northeast view of the combined cattle shed and hay-storage barn. The galvanized-iron roofing and siding are durable and need not be painted for 10 to 15 years ←

View from the southwest. Cattle are fed silage and concentrates in bunks near the barn, and hay in shed ↓

A Beef Barn for the Thrifty

This unusual beef barn combines the utmost in efficiency with practical farm economy

"IT TAKES a whale of a lot of hard cash to put 80 tons of hay on stilts." So reasoned economy-minded Jay Newlin, Polk County, Iowa, cattle feeder when 3 years ago he was faced with the problem of building an entirely new feeding unit.

Putting thought into action, Feeder Newlin tucked his legs under the kitchen table and forthwith planned a barn which dispensed with overhead hay storage. Other expense-saving ideas went into those plans, too. Net result was that when the barn was built, it cost Newlin but $1,800—less than half the price of a neighbor's more conventional building with the same capacity!

And the barn isn't a ramshackle affair either, as the photographs on this page will bear out. With good floors and foundations, more than adequate framing, and galvanized, copper-bearing iron roofing and siding, it promises to be in service till a ripe old age.

Why is the barn so inexpensive? Well, Newlin points out that storing hay from the ground up (see section diagram and floor plan) has eliminated the need for expensive, space-consuming bracing; there is no waste area for a driveway; the straw loft over the cattle shed (maximum capacity of 100 calves) provides cheap insulation; and the metal roofing and siding, with more bracing effect than wood, required no paint. There are disadvantages, of course, but they are insignificant to this operator.

Where metal roofing and siding are not available, the structure is admirably suited to frame. Use can be made of rough-mill or native-sawed siding because the essential in the hay-storage unit is dryness rather than warmth. Any siding that can be battened or laid so as to exclude driving rain will do the trick.

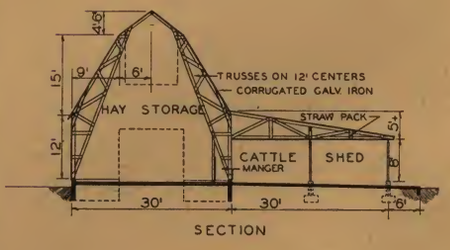
The hay unit has a 5-inch gravel or sand-fill floor, the cattle shed is concrete floored to a depth of 5 inches over a gravel fill. An apron extends out 6 feet from the eaves line on the open side to prevent mudholes from water drip. Newlin recommends that for colder climates roll-back doors should be used in the shed, some light provided, and a feed alley built parallel to the hay manger, which, if cut for a door or passageway, could give comfortable access not only to a feed bunk under the manger but to the body of the shed as well.

Altho the barn was built 4 years ago for $1,800, it would undoubtedly cost much more to duplicate it now. Prices of steel and cement have been upped and wages for labor are higher.

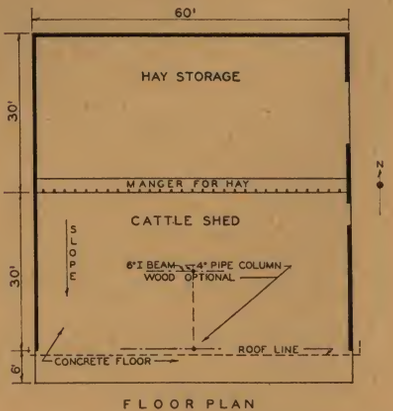
While it was designed primarily for feeder cattle, Newlin thinks the barn, with a few changes, would serve equally well for a dairy herd. At the present width, he figures it would accommodate 24 stanchions and 3 box stalls; or the cattle could run loose in the shed and be milked in an attached "milking parlor."

Detailed construction blueprints and a materials list for this beef barn may be obtained by writing the Building Editor, 9337 Meredith Building, Des Moines, Iowa, and enclosing 25 cents in either coin or stamps to cover printing and mailing costs. In your request, please specify "A Beef Barn for the Thrifty."

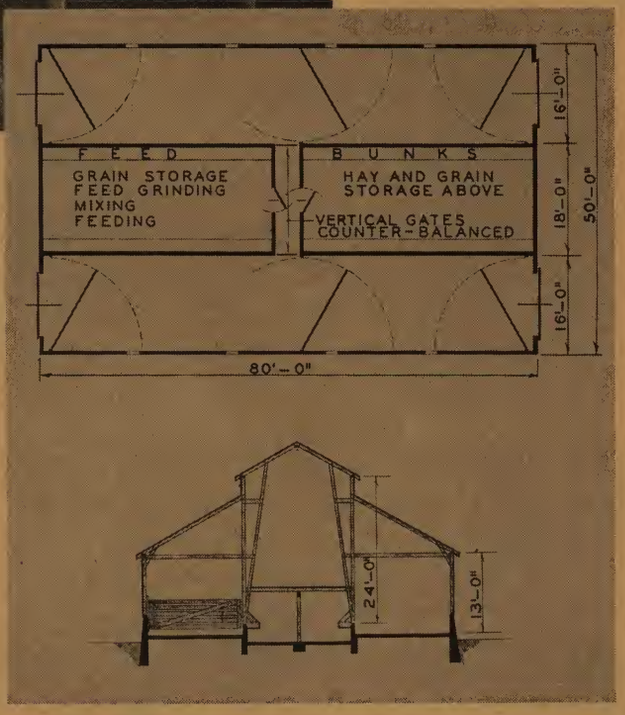
In cross section and floor plan below note ample hay-storage space and convenient hay manger. Concrete floor in shed slopes for good drainage and extends beyond the building roof line. Wood siding can easily be used instead of metal if desired ↓



SECTION



FLOOR PLAN



A Practical Man's New

Beef-Cattle Barn

It has given him a vast amount of satisfaction and service

FOR a quarter of a century Wilbur Witzel had been in the cattle-feeding business on a large scale in northern Iowa. He had traveled extensively, visiting thousands of beef-cattle farms and ranches in a broad area between Chicago and Cheyenne, and was convinced that he knew what would constitute the ideal barn for an area where soybeans and corn are the major crops for fat-cattle feeding. Quite fortunately, his brother, Will, is a thoro, particular carpenter. Between them it seemed certain something would be developed new and well worth watching in the way of a beef barn.

The barn, completed in 1937 at a cost of $5,000, is 50 feet wide and 80 feet long. With a generous supply of boulders near by, the footings were excavated wide and filled with rock and concrete. All sills were securely bolted to the foundation. After two years of use, no cracks have appeared in walls or floors. A general idea of the framing is given in the cross-section cut on this page. It is strong, well braced, carefully fitted together, and economical. The vertical siding is edge-grain fir car-siding painted with white-lead-and-oil paint. The roof has spaced roof boards covered with red cedar shingles laid 4½ inches to the weather. These shingles are first grade, all heart, all edge grain, all clear, and should give many years of trouble-free service.

The barn runs north and south and has a concrete platform and large water tank to the north with good wind protection from trees, other buildings, and a high board fence. A large concrete hog-feeding platform with a corncrib beside it adjoins the concrete cattle yard. On each end of the barn there are two 10- by 10-foot rolling doors, while the hay door is on the north end. Just inside the large doors are heavy gates, and at the south end just inside and above the gate is a tight, 4-foot section of door which may be rolled across the doorway to close out cold south winds partially but still provide an opening 6 feet high for steers.

Labor requirements for preparing the feed, feeding, bedding, and handling of cattle have been cut to a minimum with this barn. A good straw pile in the south yard and a good windbreak provide an ideal place for the cattle. They are contented and put on good gains. With this barn, silage is fed in feed bunks out in the yard. At present, silage must be hauled, but this is a temporary arrangement.

EXPERIENCE with this barn has proved its merit. In the winter of 1938-39, one hundred forty head of cattle were fed in it. At present there are 100 head of fattening cattle and 150 hogs in it. The owner places the capacity of the barn at 150 cattle and 200 hogs. In addition to this there is storage room for 60 tons of hay, 1,000 to 1,500 bushels of grain, and a mixing and grinding room.

Construction blueprints and detailed floor plans for this new beef-feeders' barn may be obtained by writing the Service Building Editor, Successful Farming, 9337 Meredith Building, Des Moines, Iowa, and enclosing 25 cents in either coin or stamps to cover printing and mailing costs. In your request, be sure to specify "New Beef-Cattle Barn." You'll find it practical in every detail.

Small-Grain Storage

WITHIN recent years, more attention has been given by Grainbelt farmers to the farm storing of wheat. The Government program and need for additional storage space has brought directly to the farmer the problem of repairing old buildings for this purpose or the construction of new bins.

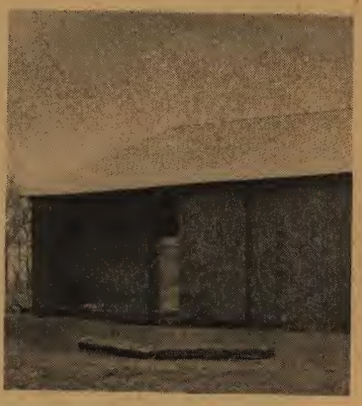
Wheat is not a difficult commodity to store safely. Sound, mature wheat will retain its quality for many years, if kept dry, cool, and free from insects. The main cause of damage is excess moisture. Moisture promotes sweating, heating, mold, and insect growth. Drying grain *after* it is harvested is slow, difficult, and expensive. Only during wet harvests is there excuse for threshing grain with excess moisture, or for storing grain with more than 13-percent moisture.

Grain in farm storage should follow the temperature of the seasons, warming up in the summer and cooling off in winter. If there is a lag between the seasonal change, excess moisture is likely to accumulate. Therefore, ventilation is considered along with structural plans in every sound farm-storage program.

Three structural requirements are listed for grain storage bins: First, good foundations set upon solid ground, with footings wide enough to prevent settling. Second, floors must also be tight enough to prevent grain leakage and strong enough to hold its weight. Old floors may be covered with new wood flooring or sheet steel. Concrete floors must not be set directly on the ground without a gravel float or other insulation, lest grain grow musty. A steel bin should be set on a wooden platform above the ground or on a foundation made of hollow tile with gravel-filled center spaces. Third, side walls of wheat-storage bins must be strong enough to resist bulging or bursting.

Wheat is naturally warm when harvested, sometimes being 100 degrees when put in storage. It should be cooled as soon as possible, for hot grain sweats. Unless provisions are made for cooling, grain in the center of large bins will stay warm for many months.

In wet harvest years when it is not possible to thresh grain dry enough for safe storage, special precautions must be taken. Two methods have been found successful: moving



Here a good storage unit has been made of two box-cars set 10 feet apart and covered with a permanent steel roof. Its capacity is 4,400 bushels at a total cash cost of around $300

A simple-type, cheaply constructed storage for wheat. Altho this structure lacks adequate bracing for long life, it has served satisfactorily for nine years. On the 1932 crop it paid the owner more than double first cost

Permanent and temporary storage for grain found side by side. Building on the right is a high-class structure. The round-roof shed can also store quantities of wheat in an emergency

These two concrete silos were converted into wheat storage space with dump pit and elevator. Total capacity is 16,000 bushels. Walls must be waterproofed on the outside to exclude moisture. Additional steel bands to hold the wheat pressure are also necessary. Pit must be filled or a false floor constructed above the ground

Here we have the double-bin type, with driveway between. The walls are made of corrugated sheet steel installed over wooden shiplap construction. The capacity is 5,200 bushels

Temporary storage may be provided by making a wooden platform and putting on low side walls of shiplap firmly braced

Empty horse barns and other buildings can be filled with wheat if walls are braced and foundations strengthened enough for great weights

This one-h.p. electric motor and 12-inch sirocco-type fan is suitable for blowing air thru a 1,000-bushel bin of wheat as described on this page

This steel bin with ventilated side walls and suction cupola holds 1,000 bushels of wheat. Cold grain draws moisture from the warm, so watch for cold-weather damp areas near walls

the wheat frequently (or transferring it from bin to bin), and ventilation—air movement thru the stored grain at prevailing temperatures.

Grain rapidly loses its moisture when exposed to the sun and wind prevalent in the Wheat Belt during harvest. The rate of moisture loss depends upon the humidity and temperature of the air. Piles of grain may be shoveled over or "turned" to expose more of it to the drying effect of air. This method is effective only for smaller quantities of grain.

A method more effective than turning by hand is moving by mechanical means. At the terminal elevators wheat is "run" by elevating machinery, taken from one bin, elevated, and dropped into another bin, thus exposing it. Moving by power elevators can be used just as effectively on the farm, provided the equipment is available. Usually one or two transfers are enough.

Ventilation, the second method, accomplishes essentially the same purpose without moving the grain.

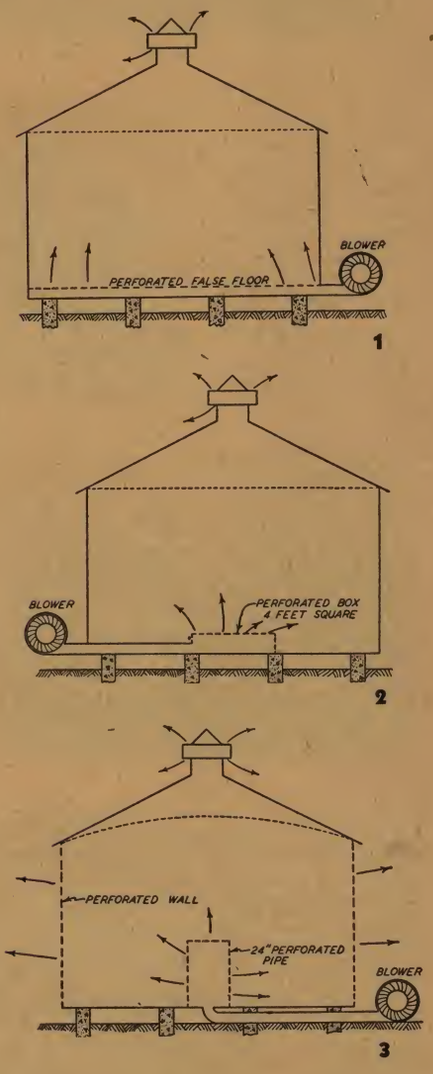
Because about 40 percent of the gross volume of bulk wheat is air space, little power is required to create movement of air thru wheat. Tests on grain-ventilating methods classify *natural ventilation* as that accomplished by wind action or heat, and *mechanical ventilation* as air movement by a mechanical blower apparatus in the bin.

One of the most practical methods of natural ventilation for wheat in long-time storage is ventilation thru the floor. The floors of steel or wooden bins are made of perforated sheet steel so that air is free to circulate upward or downward thru the grain. The results in this type bin have been quite satisfactory.

Ventilation by wind action has been effective in drying wheat in storage bins. Wind creates a pressure on the windward side of a bin and suction on the leeward side. These tend to move air thru the grain, provided the walls are not airtight. The effect of the wind is increased by a pressure cowl on top of the roof, connected to a large flue extending down into the grain. With this arrangement, the wind blows thru the opening and down the flue to the center of the bin. In 1,000-bushel bins of this kind, wheat with 14-percent moisture has been dried and stored without damage.

Mechanical ventilation can be made much more effective in drying grain than natural ventilation because the air movement is more rapid. The two requirements for effective drying by forced ventilation are that the humidity in the air which is circulated thru the grain must be low enough to dry the grain, and that air must pass thru the entire mass of the grain and not short-circuit thru certain areas.

Three practical methods of doing this are indicated by the drawings on this page. The method indicated by No. 1 is applicable to bins of all kinds where a false floor covered with perforated sheet steel can be installed and the air blown into the space beneath the floor. Method No. 2 can be used in any bin. The perforated chamber is set upon the floor in the center of the bin and connected by a pipe to the blower outside of the bin. Method No. 3 is suitable only for the steel bins of circular construction, which have perforated side walls and a central flue extending vertically thru the grain.



Three practical methods of mechanical ventilation are shown above. The first two can be applied to any bin, the third to those with perforated sides

The basic principles here applied to wheat storage are applicable to storage of oats as well, and other of the small feed grains; wheat as a surplus, commercial grain is typical. Shelled-corn storage is discussed on following pages 58 and 59.

Corncribs

The cribs on these pages are types which have met the test of service, range from low to high in cost, will help you get out of your corn storage perhaps more than you put into it

←1 Among the least-expensive types of cribs to qualify for sealing fitness, this one makes use of snow fence for sides and ends. With a good foundation and roof, it will last a long time and be low in maintenance

2 For a greater degree of permanency at some additional cost this crib is very popular. When painted it is attractive and fits well with the other farm buildings. A crop of reasonable maturity will keep well in such a crib →

←3 To concentrate storage space and make possible a covered driveway at some future date, many farmers built their new cribs in this way last year. Note clearance beneath buildings where dogs may hunt the pesky rats

4 No driveway was needed on this farm, so the two crib sections were placed so that only sufficient space was left for air circulation. This builder has set his crib high for shelling convenience and a better rodent-control factor →

WITH the present-day effort to increase corn yields, new varieties have been introduced which require a longer growing season; and, as a result, corn contains more moisture at harvest time. With the Government's moisture-content standards in connection with corn loans, it is doubly important to provide for the removal of this moisture. The solution to the problem may be found in the kinds of cribs and bins you have on your farm and in husking and storage practices.

A good crib must provide sufficient air circulation, and this and the resultant rate of drying depend largely upon the width of the building. We suggest consulting Government width recommendations for your locality, because they vary over the Cornbelt.

Height should not be too great—dry corn will shell badly if it falls over 20 feet. Cribs longer than 40 feet should have either several openings for filling with a portable elevator, or a cross conveyor if one inside elevator is used.

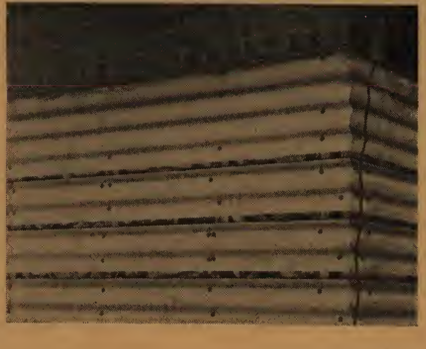
Since both shelled and ear corn cause considerable loads on side walls, braces are almost a necessity for permanence. The foundation, too, is of great importance. This should extend down to solid ground, and in all cases below the frost line. If concrete is used as a foundation material, it should be reinforced with 2 half-inch reinforcing bars, both near the top and near the bottom of the foundation. The building must be securely anchored to the foundation. The use of gutters and downspouts to carry rain water away from the foundation is recommended to minimize settling and heaving in freezing weather.

To make your crib rat-proof, build it well clear of the ground to provide free access to cats and dogs underneath. Clear away piles of rubbish near the crib. Rats do not like to come out into the open. The driveway to double cribs should be protected, doors kept closed. Small wood cribs need barriers; usually the crib is lined with hardware cloth to about 2 feet above the floor. A strip of metal around the outside of the crib extended upward from the hardware cloth will prevent rats from climbing past. Special clay and concrete blocks are now available which have openings for air, but which are too small to admit marauding rats.

Narrow cribs are considered more effective in drying out

5 Highly popular thruout the Cornbelt, this attractive structure not only houses corn but also machinery, farm wagons, and a host of extras above the driveway. On a bushel basis alone it is fairly expensive →

←6 Storage costs per bushel are reduced here by combining corn and small-grain storage. The same elevating equipment can be used for both corn and grain. Built for weights, such a structure will wear well thru the years



←7 Corncrib slats shown here represent something new in the farm-building field. They are a combination of asbestos and Portland Cement subjected to great pressure. Attachment to the frame is with leaded nails

8 Steel bins have provided satisfactory storage for dry shelled corn where the joints in walls and roof are made adequately tight to prevent leaks. Anchorage against blowing is needed. Shelled corn in steel bins can be more easily protected against weather, farmstead pests, and livestock

9 A prefabricated, creosote-treated wood crib with large central ventilator. Such a structure does not "catch" as much air as a rectangular crib and ventilation is much more difficult. Wind pressure ventilation has proved effective in experimental tests in the Cornbelt and is being widely advocated there

10 An experimental, 1,000-bushel, circular steel crib provided with wind-pressure ventilation. The ventilator is made to face the wind, and the air passes thru the corn from a central flue to the perforated outside walls. This structure has given good results under actual field conditions

corn than wider cribs because more air will pass thru them.

CIRCULAR or many-sided cribs will not catch as much air as rectangular ones because of their shape, and their diameters are also about double the width of single cribs; ventilation is therefore difficult. Even where a central ventilator of the old type is supplied, it has not been effective in drying out high-moisture corn. However, a trial with two circular cribs supplied with wind-pressure ventilation shows them to be comparable in effectiveness to the single cribs. The type of ventilators on these cribs is shown to the right at the top of page 59. This circular crib has a rotary ventilator facing *into* the wind. The air is scooped into the ventilators and down into a large central tube which introduces the driest air in the most critical part of the bin, resulting in uniform drying of the contents.

Storage of shelled corn received little attention until the fall of 1938, when the first attempts to keep it in tight-walled bins were made on an extensive scale. With a moisture content of 13 to 14 percent or less, corn stored in this manner has kept perfectly when protected from insects. Field shelling of corn to remove the cob with its high-moisture content is now receiving considerable attention. Experience so far indicates it is difficult to dry damp, shelled corn by natural ventilation unless it is placed in rather thin layers or columns. It is more difficult to shove air thru shelled than thru ear corn. Fan ventilation may be more economical; and has proved more successful in conditioning high-moisture wheat.

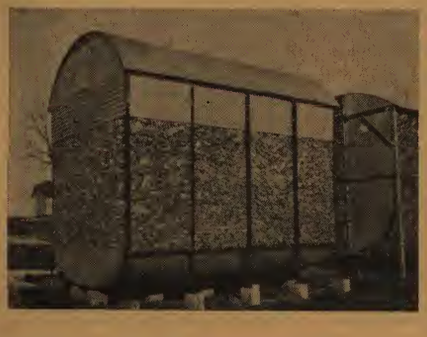
Shelled corn stored in bins has several advantages. It needs less space and can be more easily protected against weather, pests, and livestock. When insects are a hazard, bin-fumigation is easy.

SHELLED corn should not have more than 14 percent moisture when stored; this amount is less than for ear corn. Bin walls must be tight to prevent entrance of moisture. Waterproof paper between sheathing and siding is adequate. The bin floor should be well off the ground—and tight to hold the grain. If a concrete floor is used, lay boards over it to prevent dampness reaching the grain.

Certain mechanisms for turning the grain to give sufficient aeration have been satisfactory; and where the cost of installing an augur, a baffle, an additional ventilation tube, or a combination of two or more is overly burdensome, there is the last resort of hand shoveling and temporary airing in layers. At a recent meeting of agricultural engineers a plan was explained whereby a corn farmer used a combination of two horizontal grain augurs on the floor and one vertical augur thru the grain to pull warmer corn from the center out to the outlets. Thus, whenever grain was fed, it was taken from the more dangerous area and the drier grain remained for later feeding. In this connection, remember that the warmer months are your severe hazard points.

11 The concrete block double crib with small-grain storage above is often found in Iowa, eastern Nebraska, and Illinois. Properly constructed, this type keeps a crop satisfactorily with very low maintenance cost

12 The clay-block corn- and small-grain storage unit is a common sight where freight rates permit tile to compete successfully with other materials. Here again, cost of maintenance is low and satisfaction high with the owner



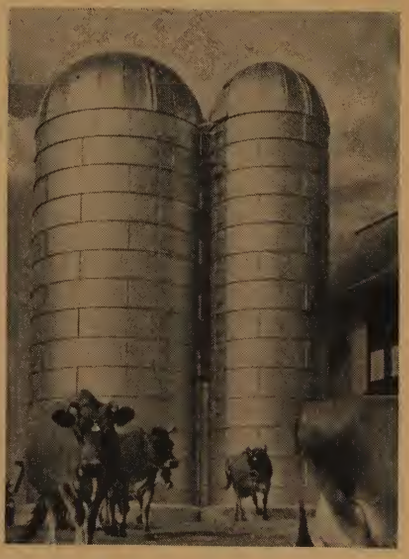
13 An experimental type of steel crib under test by several manufacturers, of whom one now offers a similar structure to the trade. Tests and observations are being made at Iowa State College on this new equipment

14 For many years this type of steel crib has been giving a good account of itself. Steel bins, too, proved safe storage equipment for 1940's crop when shelled and sealed to make crib room for '41's big supply of corn

Silos . . . for storing great quantities of high-quality feed, they have no equals

Closeup of a new concrete-stave silo

A large, strong, clay-stave type silo



Steel is handsome—and fire-resistant

SILOS have seen a wave of popularity come and go, with hundreds of them left stranded in areas where perhaps they should not have been constructed. Perhaps changing types of farming have also been responsible for many unused silos. Nevertheless, they have a permanent place in the feeding program of farmers in practically every state in the Union. As a means of carrying surplus feed into years of shortage, they have demonstrated their worth again and again. As a source of succulent feed thru the winter months, they cannot be excelled. And now with the wide introduction of cereal grass and legume silage, a new era of popularity for the silo has dawned.

It must be admitted, however, that there are circumstances under which feed, tho possibly less desirable, can be stored more economically in a dry condition. The silo is not, therefore, a structure that can be built without careful consideration of all factors, especially the item of first investment and filling costs. And in this connection, reference is made to the permanent above-ground type. Movable and underground silos are discussed on the following page.

Tile and concrete silos enjoy the advantages of attractiveness, durability, fire- and wind-resistance. Tile is commonly found where clay products are available locally, or can be shipped at reasonable cost. A recent development is a clay-stave silo, in which no mortar is exposed directly to silage acids. It is popular with those using large quantities of grass silage, the acid from which apparently acts rapidly on mortar joints.

Wood silos, once the most common type when built of staves, are enjoying a new interest because of improved methods of treating the wood to prevent shrinkage and resulting wind damage. Resistance of the wood to silage acids has made them attractive to those interested in legume silages.

The steel silo has recently been strongly pushed by manufacturers, and presents itself frequently in districts where silos are numerous. It needs firm anchorage in regions of heavy wind.

The well-made concrete silo requires little attention, except for an occasional coat of paint on the walls. Several materials are now available to protect the concrete against serious erosion from silage acids. Without question, the cement stave is most popular. It is quickly and conveniently constructed without forms. As with tile and wood silos, adequate reinforcement hoops are essential. The increased pressures placed upon many old silos by grass silage has brought to light considerable faulty construction, the worst of which has been failure to place the reinforcement hoops near enough together at the bottom of the silo. Frequently near the top, where they were not so badly needed, a concentration occurred. Some collapses have disclosed failure on the part of the contractor to place enough reinforcing or to bring it around and tie it into the door frames. Shrinking of a few additional steel bands about the lower 15′ of an old silo is a simple precaution that may save a great amount of money.

The correct diameter of a silo depends upon the quantity of silage to be fed daily. It is desirable that from 2′ to 3′ a day be removed over the entire surface of top layer. The warmer the weather, the more must be removed to prevent spoilage. A common mistake is to build a silo too large in diameter.

The improvement of pastures by controlled grazing necessitates summer silage on a great many farms. Its value in carrying a herd thru summer droughts is beyond question. A common practice is to fill the empty silo with first-cutting alfalfa or green cereal. This material is fed during the period of dry, short pastures so that the silo is again empty when the corn is ready to put in.

Sturdy, treated-wood staving

Strength in good hollow tile

Temporary Silos

Poor relations of impressive silos built above ground, they serve an exceedingly useful purpose and deserve consideration by every stock farmer

W. H. Tammeus

Enos Walters, Carlinville, Illinois, has lined silo with walls of precast, 2′ x 4′ concrete slabs which are 4″ thick. Blocks may be later used for weatherproof feeding floor

This Kansas trench silo has permanent walls to prevent crumbling and caving. Note how silage is cut like a haystack for removal. Natural drainage will prevent freezing

The paper-bag silo is widely used. This one shown at the left is built with welded wire lined with Sisalkraft paper

Another Kansas trench silo of the simple type. In it silage will keep for years when properly sealed. Banks will crumble and increase silo size each time it is used. Its cost is limited to the expense of removing soil from the big trench

OUT of the Drought has come a widespread respect for temporary silos, which have saved many a man's herd of livestock.

Two main types are commonly used, the trench and the pen silo. The trench silo, which was the original way of preserving green feed materials, will not only carry feed thru a season satisfactorily, but will preserve it for several years when properly sealed against air, or surface water. Its possibilities for protection against prolonged droughts are obvious.

Naturally, the trench silo is not attractive and should be screened from view, where it is convenient to fields and feed lots. The usual size is 8′ deep, 8′ wide at the bottom, and 12′ wide at the top. This provides 80 cubic feet for each foot of length, which will easily hold one ton of silage.

As indicated in the illustration, many trench silos are made permanent by lining the walls with precast concrete slabs or other forms of masonry.

THE pen silo consists of wire fence or slat cribbing lined with heavy layers of special paper. For grass silage this type is successful when two layers of paper are used. Rarely are these silos built higher than 20′, and they are usually about that in diameter. The contents cannot be held over the summer. After each section is fed out, the fence should be rolled up. marked, and stored for the next season, The paper may be salvaged for some other purpose. Use new paper for the next season. While the pen silo is inexpensive in every respect, the first cost is highest. The fencing may be used many times with new paper, making each succeeding year's cost for materials very low.

Cornering Fence

FENCE is our most neglected farm structure, yet it represents an investment of about $1,500 for 1,600 rods on the average Midwest farm. Its estimated upkeep ranges from 9 to 18 cents per rod, an unnecessarily high figure because ends and corners are seldom built right.

With the many excellent brands of fence now available, no man need take chances in buying the right kind. Very often, however, a good product is partly wasted because the owner fails to take sufficient time properly to anchor it to the ground.

End or corner posts should first of all be of durable material, as a considerable amount of time is required to build a fence. The diameter need not be large on the posts, for a 6″ post properly treated against decay is satisfactory for most types of woven-wire fence. Larger diameters are expensive and better results can be obtained by nailing lugs to the bottom of a smaller post. Set the end post at least 3′6″ deep in most areas to prevent frost upheaval.

The wood compression brace will depend in size upon its length. For a 9′ brace, a 4″ round post or a 4″ x 4″ wood member is the minimum. Long, slender braces buckle and make an unsightly fence.

The wire tension member should be composed of at least 2 double strands of No. 9-gauge galvanized wire. Attach it at the ground line of the corner post and at a point approximately 12″ from the top of the brace post.

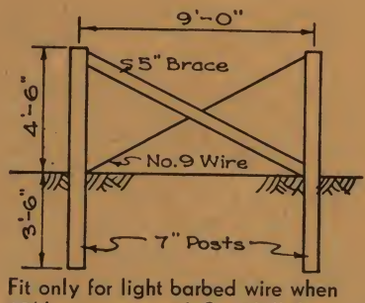
In a series of tests conducted at Iowa State College on various types of end and corner structures, the double-span assembly shown here proved the most satisfactory, being simple, cheap to build, and durable. Treat the wood members to prevent decay. All of the posts, including the wood braces, should be 8′ in length. The corner post should be 6″ in diameter, the middle post 4″ in diameter, and the end brace post 3½″ in diameter. Set the 3 posts 3½′ in the ground and use 2 double strands of No. 9 galvanized wire for the tension brace.

This variation of the double-span assembly is also standing up well in long, hard service

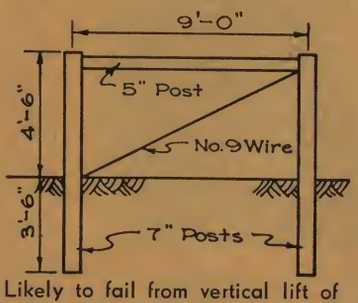
For a corner assembly this one is practically useless. Compression brace is too shor

Both the tension wire and wood-compression brace are inadequate, and such a fence always has a very run-down appearance

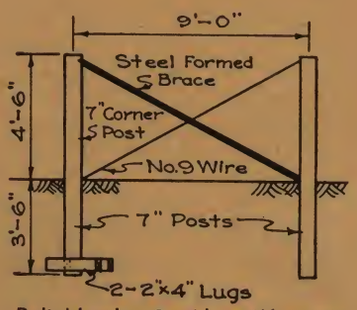
A big stone holds post, but requires more work than a good corner, is unsightly



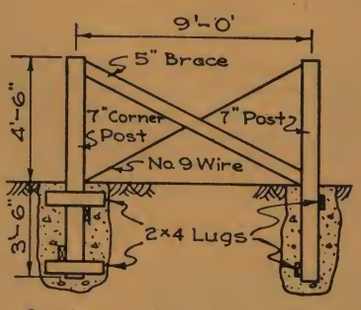
Fit only for light barbed wire when 10′ braces are used. Set 3′6″ deep



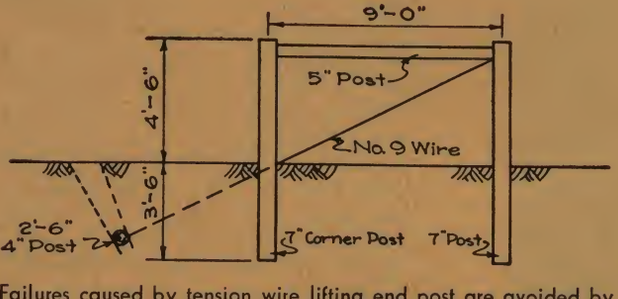
Likely to fail from vertical lift of end post. Better than one at the left



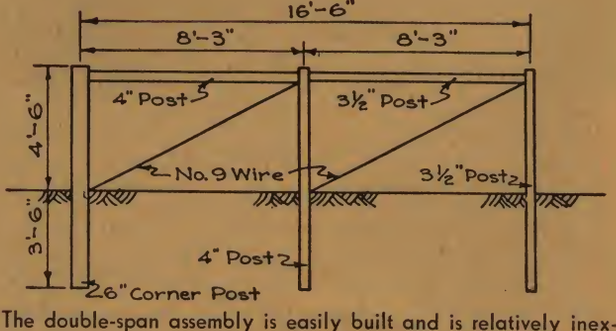
Reliable when 2 x 4 lugs 4′ long are notched into post 6″ above bottom



Satisfactory but expensive. Lugs 18″ long. The hole is cement-filled



Failures caused by tension wire lifting end post are avoided by attaching one end of wire to a "dead man" 3′ to 4′ back of end post



The double-span assembly is easily built and is relatively inexpensive, only a second brace and tension wire being required

Left: Popular in Midwest, the arrangement stands well. Complete drawing and details, page 62

Right: Good steel corner construction. Both post and braces in cement. Corner-post footings should be made 3′ deep, 24″ square at the bottom, and come to 18″ at top

The distance between the centers of the posts is 8′3″, making an over-all dimension of one rod. A double-span corner like this one cost $8.70 for materials and required 4½ man-hours of unskilled labor.

ALWAYS bear in mind the fact that fence is subjected to a great range of temperature, at least in the northern states. Severe contraction will reveal faulty construction that might pass unnoticed under more favorable conditions. There is always the threat of emergency strains produced by cattle drifting in a storm or jammed into a fence corner by quarrelsome herd mates. Consideration of emergencies, as well as everyday usage, is necessary to build a strong and lasting fence you are proud of.

The rewards of a good fence consist in no small part of satisfaction and pride, for invariably the good farmer strives to build straight fences which are not only sightly, but stand better than crooked ones. Returns from a good fence also are realized in the satisfaction that comes from a fence so secure that valuable livestock will remain where it is put. A few minutes in a cornfield can produce disastrous results in a herd of dairy cows or steers. And, above all, returns from a good fence must be figured on an actual dollar-and-cents basis because fence does represent a big investment. It should be well built and kept in good repair if its full returns are to be realized

Electric Fence

An inexpensive, quick, sure stock control for the man who needs to subdivide acres for efficient crop- and pasture-management. Tested equipment from a reliable fence manufacturer is the prime requisite

EMPHASIS upon grass-farming and soil-conservation has increased the need for temporary fence, always an important consideration with the livestock farmer. Well out of the experimental stage, electric fence is enjoying widespread popularity for this purpose. Pasture-management indicates that rotation of animals adds greatly to the carrying capacity of the soil, as well as to the health of the livestock. Strip-cropping and the terracing of land present a problem in cleaning up crop wastes that is best solved by electric fence.

There are few men who have not at least seen this type of installation. It is built around a controller, which should be placed where it is protected from the weather. This controller governs the flow and interruption of electric current, making it safe under all possible conditions. Numerous fatalities when electric fence first became popular were traced to direct connection between high-lines and fence. Under no circumstances is this safe. The Wisconsin Industrial Commission specifically makes illegal fence energized by any power source in excess of 15 volts, either direct or thru lamps or other resistance. Batteries must not be charged while the fence is in use.

The balance of the system consists of an electrified conductor or fence wire strung on posts and connected to the controller. Ordinarily 12-gauge smooth wire is used, which is mounted on light wood or steel posts spaced at intervals ranging from 20′ to 30′ over rough ground, and up to 80′ over smooth ground. Only one wire is used for larger livestock. For example, a single wire about 40″ above the ground will restrain cows or horses. For small pigs and grown hogs, 2 additional wires are necessary. For sheep a barbed wire is more effective than a smooth one.

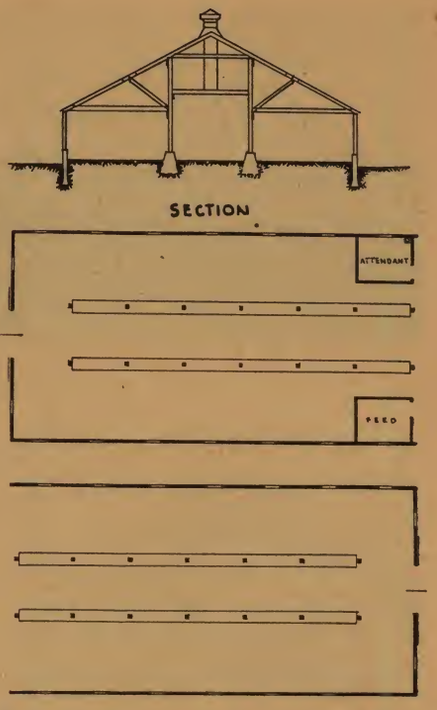
It is a relatively simple matter to move an electric fence, as it is possible to detach the wire from the posts, hook 40 to 60 rods behind the truck, and drag it to its next location. The small number of posts used simplifies their shift to the new location.

Attachment to posts is by means of an insulator to prevent current leakage to the ground during wet weather. Staples reach moist wood in the center of the post, which provides a channel for current leakage; they should not be used. Insulators are as cheap as staples, 50 being enough for about 150 rods of fence. No return wire is necessary. One controller will furnish current for 600 acres of fencing. Connection can be made anywhere along the charged fence wire. When the animal touches the wire, the current is completed thru the ground and causes a shock.

GOOD controllers sell from $20 to $40. Units designed for alternating current will consume around 5 kilowatt hours per month. A 4-cell battery for a battery unit will last 90 days. When animals are once trained to respect the shock in an electric fence, it is possible to turn the current off for several days. There is practically no limit to the number of wires which can be charged. Current can be successfully sent over a total distance of 7 miles. Current consumption is the same, regardless of distance, and the cost runs around 10 cents per month. Where a field is located some distance from the buildings, current may be carried to the fence on a light wire or telephone wire, or one wire of any fence. To cross roads or other obstacles, bury lead-covered wires several inches under the ground, lead them thru culverts, or carry them overhead.

The hazard from lightning is no greater on an electric fence than on telephone, radio, or other electrical equipment. A lightning-arrester is furnished with all the good controllers.

This lambing shed, built for a cost of $3,000, returned Blanchard 517 lambs from 485 ewes



The section diagram at top shows framing plan—44 feet in width. The mow is floored for hay storage. The floor layout has been divided in two diagrams below; half nearest attendant's room may be penned for lambing

Sheep Barn Dividends

A Kansas flock pays out on its building investment

WHILE special equipment for handling sheep is not absolutely necessary, its use means dollar dividends thru convenience and efficient flock-management. This was the observation of Roger Blanchard, Kansas farmer, who noticed that farmers with such equipment claimed reduced lamb losses and better feeding results.

With this in mind he asked for the assistance of extension architects at Kansas State College in planning a lambing shed that would handle a flock of 500 ewes—a building with approximately 8,000 feet of floor space and complete with the necessary fittings.

When the plan was accepted and the shed completed, Blanchard had one of the best sheep-producing units in the state. Its use during the 1941 lambing season brought a dividend of 517 fine lambs from 485 ewes.

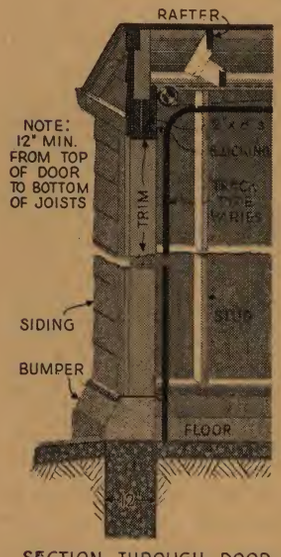
The frame building measures 44 by 180 feet with a tight, wood-shingled roof. A wide feed alley runs down the center full length, lined with feed racks which may be taken out to make way for hinged panels for temporary lambing pens at one end. Provision is made for dividing the entire length into four large pens as desired.

Overhead there is a loft flooring the full length of the shed, and ample hay storage.

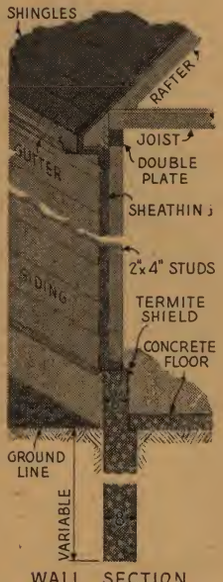
On the first floor is a comfortable bunk room for the man on duty during the lambing season—an insulated, plastered, heated room comfortably furnished with chairs, a table, bed, and radio. Just across the alley is the grains-storage room. Thus every possible time- and labor-saving convenience is at hand during the busy days of lambing time. Quarters for the flock-master or an attendant near the flock will return their cost many times over in a sheep enterprise.

The building is wired thruout for lights and convenient outlets, and an electric pump takes fresh water from a well in the center of the building.

The total cost, including all equipment, materials, and labor, came to approximately $3,000, or a first-year investment of $6 per ewe. The building measures up in this and other ways to the standards set up by farm-structures experts everywhere. Sixteen square feet of floor space per mature animal is recommended; trough and rack space of 15 to 18 inches per sheep is considered ideal; and 4-foot hinged panels are considered the best pen dividers. Blanchard's barn has all of these, with the storage space and shepherd's room as additional aids in a greater production.



SECTION THROUGH DOOR



WALL SECTION

Above, left: Garage entrance with bumper block and overhead clearance. Right: Where building is used as heated shop, heavy building paper or insulation might well be added

GARAGES

IN BUILDING a new garage, the location is usually the major problem. You will want it as close to the house as possible for convenience, yet not where it will cut off light or the view of the barnyard. Of course, if you are building a new home this problem does not arise, as you can put it close to the house and make the necessary allowances in the floor and window plans.

Allow plenty of space in your garage. Don't make it so small that it's a hard job to get in or out. The old swinging doors are not as popular as they used to be. Many of the new overhead doors are very easy to open and when open they're completely out of the way.

The best floor is concrete because it is easier to keep clean. Foundations should go below the frost line. If you plan to include a workbench, provide plenty of light. This means at least an overhead drop cord, as well as plenty of window space. And 4 feet should be allowed for a bench. (The average garage is 20 feet long.) The garage that is to serve as workshop as well should be thoroly insulated in northern climates and given ample wind protection in warmer localities. If a heating stove is to be used, provide sufficient space around it so that it does not constitute a fire hazard in connection with car storage.

As to lighting, most garages built today have a switch in the house so that lights can be turned off after you come back in. This should be a 3-way switch with a control at the garage also.

Finally, don't fail to provide a convenient and easy drive. Make the drive plenty wide and allow space for a turn-around. If near the house, space should be provided on the main driveway for your guests to park their cars.

Remodeled Service Buildings

Investing for Tomorrow

DEPRECIATION is one of those things that sneaks up on you unawares. Here you are one day with a barn—there you are next day with a pile of old lumber, because the roof caved in.

The only way to avoid depreciation is to spend enough over a period of years to keep your building investment from declining. Most of us think of depreciation as a loss of value which isn't actually felt until the necessity arises to replace the building—just as in the case of an automobile. But that isn't a true picture of what really happens.

As individual farm buildings become older, they are repaired, painted, reshingled, rearranged, and even partially rebuilt. Some buildings may be torn down, others may continue indefinitely if repaired at the proper time, and still other new buildings may be erected to take the place of those which have outlived their usefulness.

A set of buildings is thus continually changing. A car, on the other hand, becomes less valuable each year as new models come out and wear and tear take their toll. If new engines were installed when the old ones gave out and if new bodies were substituted for the old ones when they became obsolete and worn out, then the auto would be similar to the set of farm buildings. Instead of starting over with a new set of farm buildings every 25 or 50 years, farmers are more likely to repair, rearrange, and remodel what they have.

An example will illustrate how depreciation can be offset. A certain Iowa farmer (call him Mr. Johnson) bought a quarter section farm in 1930 with a set of buildings at various ages, the buildings as a whole being valued at $4,000. At the time a new set of buildings would have cost about $8,000. During the ensuing 5 years, Johnson found it difficult to pay interest and taxes, let alone spend anything on the buildings. It was necessary, of course, to keep up the fire and wind-storm insurance on the buildings and to replace boards and window glass. But these items required only a small yearly outlay.

In 1936, however, Johnson spent $200 in reshingling one of the buildings and in 1937 he spent $150 on painting and $150 on two new movable hog houses to replace an old central hog house that was not satisfactory. In 1939, he spent a total of $400 in modernizing certain features of the house and $150 on two more movable hog houses. During the 10-year period 1931-1940, Johnson spent $1,050 in major repair and replacement items and roughly $150 in minor items, a grand total of $1,200 or an average of $120 a year.

If you valued the buildings in 1941 you would find them worth about the same as in 1931. There are a number of changes: The movable hog houses are taking the place of the central hog house, the house has had a basement added and the kitchen modernized, and the barn has been slightly rearranged with two horse stalls converted into cow stalls, and an additional bin for feed. But the building investment remains practically the same. Some of the buildings are worth less than in 1931, the ones that have not had any attention, while the others are worth more than in 1931.

Farmers and experts don't agree closely on how much should be allowed for building maintenance. Part of the disagreement is because they include different things in the term maintenance. If you take maintenance to mean depreciation as well as repairs, or the total annual cost of keeping a suitable set of buildings and other improvements in working order, this total cost on Cornbelt farms probably averages from $1 to $2 an acre. The top figure of $2 comes from a study of records kept on 720 farms in eastern Iowa during the last 11 years by Herbert B. Howell, the fieldman for the Mississippi Valley Farm Business Association. Howell found that when the total cost of maintaining buildings, water systems, tile drains, and so on was figured on present value of the improvements themselves, the cost came to 5 percent a year. This is about twice as much as appraisers usually allow for building costs.

Painting, repairing, and remodeling are necessary to offset the depreciation in farm buildings and to maintain your investment

Of this total annual cost of $2 an acre, three-fourths ($1.50) represents an estimated allowance for rebuilding, "depreciation" as accountants use the word, plus 50 cents for minor repairs and insurance. Insurance costs averaged 1/12 of the total annual building cost, or about 17 cents a year per acre. Repairs amounted to one-sixth of the total, or 34 cents.

Altho total annual building costs averaged around $2 an acre, Howell found that individual farms varied considerably. Costs generally ran higher on the small farms, and averaged $3.03 an acre on farms of less than 140 acres. On the large farms, over 360 acres, the costs averaged $1.61.

In contrast to this Iowa study, a recent Indiana report by Lynn Robertson estimates unusually low rates of depreciation on farm buildings. The average life of a barn, according to this study of 242 central Indiana farms, is 94 years. Double corncribs had a life expectancy of 70 years, and poultry houses a life of 50 years. Movable hog houses had the shortest life expectation—22 years. According to these figures, depreciation ranged from only 1 percent on barns to a top of 5 percent on movable hog houses. The average of 2-percent depreciation on a set of buildings costing $6,000 when new would amount to $120 a year—or 75 cents an acre on a quarter section farm. To this total, however, must be added the minor repairs and insurance.

Much more important than the accounting method used to take care of depreciation is to see that repairs and replacements are made on schedule. Whether you accumulate a fund for building maintenance or not, if you don't replace weakened timbers in the barn, you're likely to face the difficulties mentioned at the start of this article.

Cornbelt farmers are enjoying a rapid improvement in income as a result of strong consumer demand for their products. Price of hogs, butterfat, eggs, and chickens have been guaranteed by the Government at fairly high levels, and may exceed those levels later on. Now is certainly a good time to get farm improvements into shape so that only a minimum allowance over the years ahead will be needed. Many farmers have been unable to keep up their building investment during the last 10 years of depression and droughts. Now, with favorable earnings ahead, is the time to get in shape to withstand another depressed agricultural period if it comes.

"Once in Our Lifetime"

Farm architect and owner meet to solve a problem common to many dairymen

The above picture of the barn, taken before painting, shows new addition

"WE'VE just bought the old home farm," said Martin Ballenbach of Dane County, Wisconsin, after he had introduced himself and taken a chair in the office. "You see," he continued, "we want to improve our buildings to make them meet up-to-date needs. We will probably be making these improvements only once in our lifetime, so we want to do it right the first time. The cost will have to be low."

The cost *was* low, and the Ballenbach barn seemed such a satisfactory answer to the remodeling problem so many face that it is worth study. The original barn was a gable-roof structure, 36 by 72, of timber-frame construction with a stone basement. Foundation and frame were in excellent condition and a metal roof had been applied a few years before. The stalls were too narrow and short for the large Holstein cows. Other constructional details added to the inconvenience of chores.

Increased acreage of legume hay meant that more haymow space was needed. Tho the barn roof could have been raised and made into a gambrel, it was found that a 36-foot addition could be made for the same cost. Careful planning and cost estimates showed the best procedure for the conditions on this farm would be to lengthen the barn. The haymow is high, and, with the addition, provided ample space. In order to extend the barn, a bank had to be cut down. While excavating for the basement, an approach was dug to make it possible to drive from one end to the other with a wagon or manure-spreader. Notice in the arrangement of the new barn that the many doors have been filled in with masonry walls and the top parts have been used for windows. After a machinery shed had been built and equipped to house temporarily the stock not on pasture, the interior of the barn was literally scooped out. Rotten planks, wood posts rotten at the bottom, and worn doorjambs were removed.

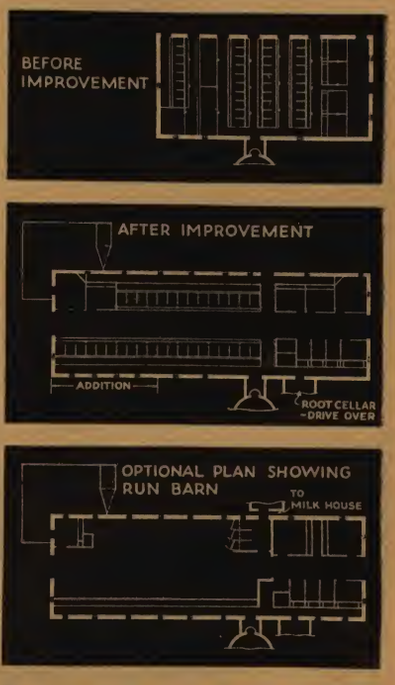
The end wall of the old barn was removed, and a 16-inch wall for the addition was built, using strong Portland-cement mortar tempered with lime. Care was taken to secure a substantial footing for the new wall.

The 3 rows of posts thru the center of the barn were removed, and 2 girders with round steel posts setting on large concrete footings took over the task of supporting the hayloft and barn above. These girders and posts were carefully located so they would not be in the way of stalls, gutters, or pens. Since the original haymow joists were spliced over the haymow beam, new joists had to be placed over the litter alley or center span.

The concrete floor was placed over a well-tamped concrete fill. Clean sand and gravel (6 gallons of water to a sack of cement), careful mixing, thoro tamping, a wood-float finish applied after the concrete had begun to harden, and protection from drying for a week after pouring —all helped to make a smooth but not slippery floor that is durable and dry.

Roof boards and gable-end siding were made from lumber taken from the end of the old barn.

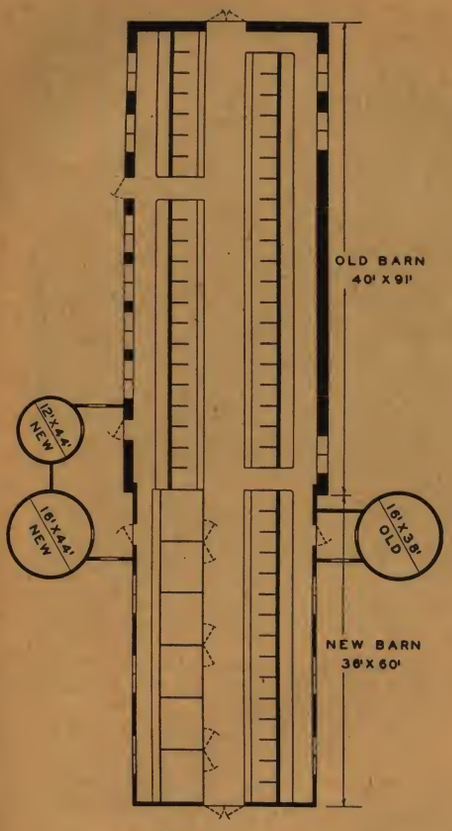
The homemade ventilation system proved quite satisfactory. This consisted of intakes designed to prevent backdraught, and 2 large, insulated outtake flues running from the barn floor up thru the roof. The barn is dry, and the drinking cups do not freeze. Boards and framing will not rot because of excessive moisture.



The floor plans show the barn as it was and after the changes described had been made. An alternative arrangement is the run barn shown, which offers economies in construction. Disadvantages are lower temperature, increased bedding requirements, greater space necessary per cow, greater labor requirements

Electric wiring was installed, and good lighting has so reduced chore-labor requirements that a hired man is no longer needed here.

The cost of improvement and enlargement of this barn, not including the water system and drinking cups, was $1,800.



Above: The addition and silos make perfect union with the old. Left: Floor plan

A Remodeled Dairy Unit

The new in barns is fitted to the old

ON THE H. F. Schroeder place, West Bend, Wisconsin, the dairy herd had outgrown the barn. Schroeder and his two sons were hard put for accommodations with their old stone basement barn and its overhead hay storage.

The easiest way out would have been to tack on to the present structure. They thought it over, considering the advantages of additional barn and hay-storage space as compared to space for grass silage. They agreed on a compromise plan, a real dairy unit with ample silos attached and 15 stalls, 6 pens more herd space.

The arrangement has turned out to be entirely satisfactory for the Schroeders, and the cost was but little more than that of a conventional, two-story barn addition. For their investment they have adequate herd space, a fire-resistant building, and 2 good silos thrown in.

To the end of the old stone basement (40 by 91 feet) was added a one-story addition, 36 by 60 feet, of lightweight concrete blocks with a metal-covered, wood-frame roof. All in all there are now 56 cow stalls and the 6 large pens. The new silos and enclosure went in at the junction of the new and the old barns as the floor plan shows. The old silo (16 by 38 feet) was, of course, retained, and is being backed up by the 16-by-44 and 12-by-44 units. At the base of the new silos what amounts to a feed room has been built, and even the old storage cylinder has a new entrance enclosure, well lighted and big enough for feed carts and mixing.

This increased silo capacity has made possible an entirely new feeding plan. Last winter about 180 tons of molasses-grass silage and 40 tons of dry hay were fed. In terms of dry matter, this amounted to approximately 35 tons of hay, grass silage, and corn silage. In other words about one-third of the roughage for the herd was supplied by each of these feeds. The owner is enthusiastic about the feeding plan.

One of the outstanding features of the new building is the fire-resistant roof. All dry hay and chopped beddings are placed in separate buildings. To prevent heat loss thru the ceiling of the new barn, a good blanket of insulation has gone in between the ceiling joists and has proved itself very effective. The Schroeders were particularly concerned about fire prevention because their fine dairy herd has been built up by many years of careful breeding, and fire insurance would not cover the loss of income while another barn was being constructed and another herd purchased.

The construction details of the addition were carefully planned to provide a low-cost, serviceable building that is attractive in appearance. The thoroly insulated masonry wall was made with lightweight concrete blocks 8 inches thick. The air spaces in the concrete blocks were filled with a light, rock-like material made by exploding molten limestone.

Several precautions were taken to insure with wall construction. A substantial concrete foundation extending 3 feet into the ground and a few inches above grade eliminates danger of settlement or frost heaving. A waterproof, high-strength mortar—made of 1 part Portland cement, 1/10 part of lime putty, and 3 parts sharp masons' sand—was used for laying the blocks. To prevent moisture collection in the blocks during periods of cold weather, a vapor-proof interior treatment of cement paint was provided. To insure long life, only high-strength blocks were used.

The insulation value of the 8-inch masonry barn wall is about equal to a 24-inch stone wall, 1-inch air space, ½-inch insulation board, and ½-inch plaster; or it compares equally well with a wood-frame wall consisting of wood sheathing, paper, and siding outside, and ½-inch insulation board and ½-inch plaster inside. When metal windows and metal-covered doors are used, this wall may be considered fireproof.

The safety feature is one of tremendous importance to operators like the Schroeders who have built up a herd of high productivity—costly to replace and ruinous to the ledger in case of total loss.

From the picture it will be noted that 2 ventilators are set on the ridge of the addition. Electric fans are installed in the one vertical flue to each cupola. The flue starts at the ceiling in the center of the barn and goes straight up into the cupola. The fans exhaust about 60 cubic feet of air per minute per cow and per pen when operating at top capacity. Fresh air may be brought into the barn thru partly opened windows or fresh-air intakes. Because of the positive ventilation and thoro insulation, the barn can be maintained at desirable temperatures and still be kept dry and odor-free.

The Shroeders made up a set of standards to follow in their remodeling enterprise which included the following: good planning to reduce chore time, thoro insulation and ventilation, adequate housing for young stock, low cost, a maximum use of farm help in building, adequate silo space, and low upkeep cost. We think they met these standards satisfactorily!

Construction blueprints and detailed floor plans for this remodeled dairy unit may be obtained by writing the Building Editor, Successful Farming, 9337 Meredith Building, Des Moines, Iowa, and enclosing 25 cents, in either coin or stamps, to cover printing and mailing costs. In your request, be sure to specify "Remodeled Dairy Unit." Plans sent promptly.

The Dairy Adopts the Old Horse Barn

Eight cows at a time are brought from the loafing to the milking barn where they are milked and fed their grain ration. Bacteria count of the milk during last fall ran at 4,000

AN OLD horse barn that had become obsolete with the advent of modern farming methods has been given an important place in the dairy-farming program of C. R. Meeker of Boone County, Missouri. The way this change was brought about might well be noted by other farmers faced with similar circumstances.

Mr. Meeker, building up a herd of registered Jerseys, and needing more space for dairy operations, found his old, all-purpose barn of little use to him. He also found that to remodel it into a conventional-type dairy barn would require almost the same cash outlay as a new barn. Here is how he finally decided to make use of the old structure in his new program:

He first strengthened a sagging wall with a new foundation; then braced and straightened side walls, and patched the roof. Next all the partitions, bins, and stalls were torn out and the entire ground floor area cleared to provide a large loafing area for his dairy cows. A shed alongside the barn was retained as a place to keep dry cows and calves.

Down the center of the large loafing area he built feed racks with an alley in between. Hay racks were erected along both sides of the large loafing area and along one side of the adjoining shed. A feed room, built with old partition lumber, has gone up at one end of the building, and two concrete silos were to be erected beside this room.

With this comfortable housing area for his herd complete, Mr. Meeker turned his attention to a milking barn or "parlor" which would aid in producing high-quality milk conveniently and economically. With the assistance of the agricultural engineers of the University of Missouri, he made plans for a milking barn to be located about 30 yards from the old barn. In designing this he kept in mind sanitation ordinances, convenience, economy, and probable future increase in the size of his herd.

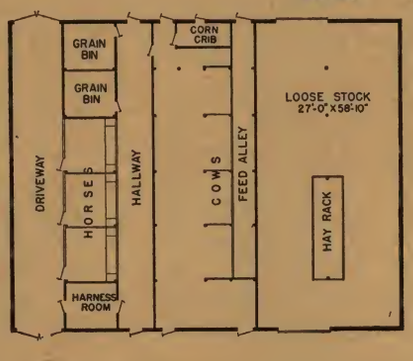
The milking parlor was built of concrete blocks. The floors, manger, and gutter are of poured concrete. This construction makes the building practically fireproof and ratproof. A bathroom complete with a shower, lavatory, and stool proves of particular value in maintaining cleanliness, since the men who do the milking also work in the fields. A feed room, milkroom, and washroom complete the building.

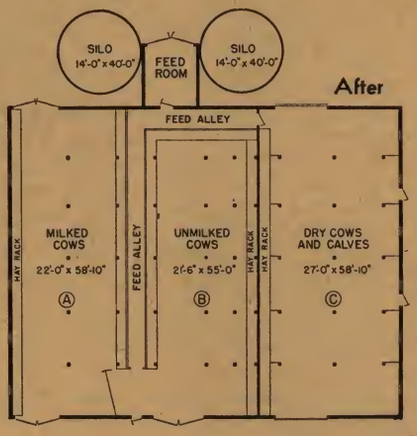
Here is how the new building arrangement is used: At milking time, cows are moved in groups of eight to the new milking barn, where they receive concentrates while being milked. Afterward they are returned to the loafing barn, being separated from the unmilked by the central feed racks and a gate.

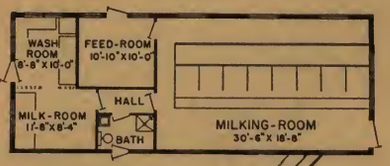
How efficient is the plan of using a remodeled loafing unit and a new milking barn? Mr. Meeker, who has tried both systems, reports that less time is required to operate the new system than if a conventional-type dairy barn were used—only about half as much time being spent in cleaning the housing units. Then, too, the cost was only a fraction of what a new dairy barn would have cost.

So with limited funds, Meeker has equipped a badly run-down farm with a barn that permits expanding his dairy to 40 or 50 cows in milk—an example of how old buildings can go modern at a profit.

How about bacteria count? Well, in November of 1940 the milk reached the pasteurization plant 10 miles away at a temperature of 40 degrees and a bacteria count of 4,000—well below the maximum 50,000 allowable! Meeker's experience proves that it's not outlay but layout that counts when remodeling for a dairy barn.







The former horse barn in the background, now a loafing barn, shelters the herd between milkings in the milking parlor in the foreground

Measuring 35 by 38, this feeding and exercise floor furnishes plenty of room for 100 to 120 pigs. Self-feeders, waterers, and an alfalfa rack are kept inside. Notice the window space, which together with the door affords plenty of ventilation and light. The door opens to the east

Hogs Adopt the Old Horse Barn

THE basement-type barn, with an opening to the south or east, has been found to be readily adaptable to the housing of hogs. These barns can offer everything in the way of warmth, sufficient floor space, and conveniences necessary in producing pork efficiently, altho their use in this respect involves an entirely new feeding method.

This article is presented as one of a group of three offering suggestions of how to make use of old horse barns that now stand idle on many tractor-equipped farms.

A basement barn on the Val Racek farm in Story County, Iowa, that is now being used for hogs offers an example of how to do it. Racek's barn had been idle most of the time, and he hit upon the idea of using it to house his porkers after he had studied the sucessful method of hog raising used by John Hendricks of West Liberty, Iowa (described in the article "Confinement Feeding," on page 71).

He carried out his idea and the old basement barn is now taking a new, important place in his farm program. First he put a cement floor, 35 by 38 feet, in the barn; and a feeding floor, 35 by 38 feet, out in front. Water was piped into the basement, and self-feeders on the floor were serviced by chutes from feed bins in the building above.

The first floor of the old barn thus serves both as feed storage space and general storage for equipment and smaller implements. The mow is still used for the high-protein roughages which are a part of the ration.

This floor space in barn and feeding area is sufficient in size to handle from 100 to 120 pigs. The sows are removed from the basement at weaning time, but the pigs never leave the cement floors from birth until they go to market. Plenty of windows for sunlight and ventilation are necessary in a barn of this type, and the floor should be laid with a gentle slope—about 1 inch to 10 feet—to insure good drainage and facilitate cleaning.

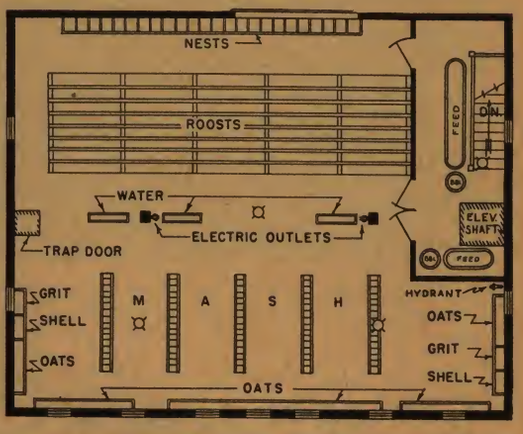
THERE are many pitfalls in this method of raising hogs which must be guarded against. Since the pigs are raised and fed on concrete, careful study must be made of the ration fed, and a sufficient variety of feed given the pigs to furnish them with all the nutrients, vitamins, and minerals needed. Careful attention to sanitation is vital. With this method of confined feeding it is the aim of the feeder to have both his fall and spring litters fattened for market in 5½ to 6 months.

With proper care, it is easier to control parasites and infectious diseases on concrete than on pasture. However, unless a farmer is willing to go into hog raising on a really scientific basis he had better stick to the old methods of producing pork and accept the old profits. Confinement feeding is specialization!

Cool in summer, warm in winter—that's a big advantage of using a barn basement for a hog house. Around both sides and the back are 13 farrowing pens. The pigs are fed green roughage from the rack

Racek keeps his feed storage bins on the upper floor of the barn and a chute leads down to this homemade self-feeder. This enables him to keep feed always available with little labor. Feeder material cost $2

The shift to tractors on the Guy Gee farm, Livingston County, Illinois, left waste space in the 32- by 40-foot barn. Altho now 50 years old, its loft was made into a snug poultry house for 370 hens at a cost of $250, including electric wiring and weatherproofing. An elevator at one end makes the handling of feed and bedding easy. There is a cleanout chute at the other end. During season, eggs go out to a local hatchery, at other times to auction or the local market

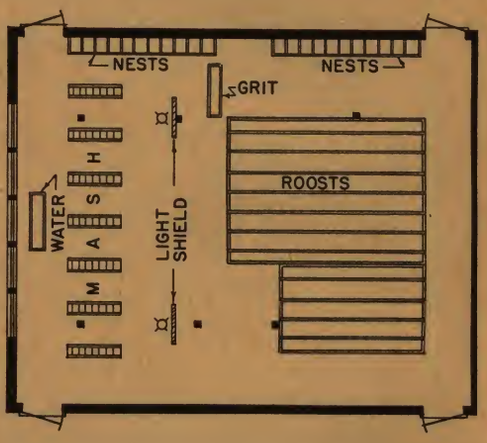


Poultry Adopts the Old Horse Barn

THE old horse barn is surprisingly well adapted for changing to a poultry-housing unit. Two Illinois farmers, Fred Adams and Guy Gee, have demonstrated the possibilities along this line, and there are probably many other examples equally as outstanding.

Adams rents his place and did not need the barn for horses. With his landlord's consent he removed the horse stalls and bins and turned the large area into a poultry house. The barn is warm, with the loft of straw above providing good insulation. Guy Gee made his hayltoft into a poultry house, which, like h at made by Adams, is electrically l ighted and soon will be equipp ed with running water.

Note the convenient arrangement of equipment in the two barns in the drawings that accompany this article. There is no crowding of the flock in these large buildings, and a little care in planning can provide all the needed conveniences.



Fred Adams and Daughter Ruth in their poultry house made from a barn. A renter, he spent $69 on job.

Fred Adams, Livingston County, Illinois, tore the horse equipment out of this 40-year-old barn and used half of it for hens in 1939. Returns were so pleasing he completed the other half and went into the winter of 1940 with 300 White Leghorns. Lumber from an old granary was used to make an inside wall. Straw is blown into the top of the barn

Confinement Feeding

CONFINEMENT feeding is a practice that is somewhat new as regards the raising of hogs, but it is reported meeting with such success that it will no doubt come into more general use. This practice of raising and feeding hogs within a confined area requires special care and planning both as to equipment and feeding methods.

John Hendricks of near West Liberty, Iowa, has used this method on his farm to put his porkers on the market a good month ahead of the usual market runs and has found it profitable year after year.

Stated briefly, the Hendricks system consists of confinement feeding together with selective breeding. His fast-growing pigs are crisscross mixtures of four or five purebred strains and are raised under "forced draft" so that in five and one-half months they average 240 pounds and are ready for market.

Equipment on the Hendricks farm consists of a central farrowing house with a paved feeding floor extending from one end. Part of the floor is roofed for shade, and all brood sows have access to it. The floor is properly sloped for easy drainage and cleaning and has a manure pit on the high side for temporary storage of sweepings. The drain has a tile outlet. A number of self-feeder creeps and automatic watering fountains are built in. The whole floor measures about 18 by 70 feet—big enough to accommodate 100 or more fattening hogs.

Sanitation is a factor of utmost importance, Hendricks emphasizes. The floor should be brushed three times daily and hosed off at least once or twice a week. After any visitors have walked on it, the floor should be sprayed with dip. Farrowing quarters are thoroly scrubbed with boiling water and lye (one pound of lye to 30 gallons of water) before sows are brought in, and the sows are washed with warm, soapy water three or four days before farrowing. Hendricks has not suffered losses from necro or other infectious diseases since using this system, and none of the pigs have ever been wormed or vaccinated.

THE feeding program starts when the pigs are two to three weeks old. They are provided with a self-feeding creep containing rolled oats or oatmeal. At about the same time they are offered skim milk mixed with a little red-dog flour. In a short time they are switched to a six-times-a-day feeding of a slop mixture he prepares. At the same time other self feeders are maintained with a mix of grains and concentrates. Also available to the pigs in individual feeders are Trinity Mixture, shelled corn, soaked shelled corn (in pans), soaked ground oats (in pans), charcoal made from corncobs, and fresh sod and earth (clay or loam). Alfalfa hay is available at all times.

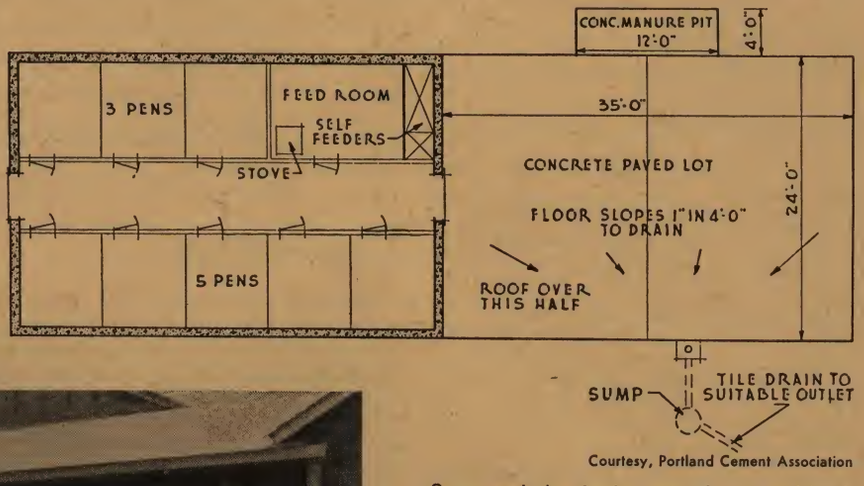
Hendricks has found the corn cobmeal, mentioned above, is readily accepted by the pigs and eliminates many of the objectionable odors around the feeding pen. The fresh sod and earth supply them with small amounts of iron and copper which they need to prevent anemia or thumps.

"In confinement feeding," says Hendricks, "you've got to remember you can't afford to leave anything out that's essential to the health and growth of pigs. When pigs range in a pasture you can depend on them to find their own vitamins and minerals to a certain extent. But when they're penned up on a concrete feeding floor, it's up to you to furnish every single element they require."

Under the Hendricks system, it is possible to add a hundred pounds of weight to a pig with an average of 300 to 350 pounds of feed. Since the rations are perfectly balanced, the pigs are always satisfied. They do not work off fat in search of food as they do while foraging in a pasture. For this reason a confinement-fed hog will be finished and ready for market in five-and-one-half months while an ordinary porker requires six to eight months to reach the same marketable weight.

Hendricks' system is based on the belief that the early crop on any market will bring a premium price. If you can finish your spring hogs by mid-August or early September, they will bring greater returns. And it's the same with the autumn-farrowed crop. If it is ready for the February market, the price will usually be enough better to pay for the extra effort.

A review of Hendricks' operations provides solid proof that his system works. One hundred eight pigs from 12 sows were earmarked at farrowing time in late February last year. On April 18, at 56 days, the pigs were weighed in by extension men at 39 pounds; 11 head were sold to give more room to the remaining. On August 3, just 106 days after the first weighing, the 97 hogs registered a total 21,534—average gain of 183.3 pounds per pig. One of the best barrows, 157 days old, weighed 276 pounds—an average daily gain of 2.13 pounds from April 18 to the weighing on August 3. That's good work!



Courtesy, Portland Cement Association

Suggested plan for farrowing house and feeding floor suitable for a confinement system

A view of Hendricks' concrete feed lot. Confined from birth to market, his hogs don't run off their fat on the range

How to Get Your Money's Worth

Practical suggestions for the materials and workmanship essential to comfort and time-saving efficiency in your farmstead buildings

YOU'RE interested in a good building job, yet you're in no mood or no position to overspend. That type of waste is out of step with emergency times, with days of changing programs for foods production. The answer to the problem is easy and threefold: (1) getting down on paper your plans and designs and deciding exactly how much of the total farm income or any division of it can be assigned to the buildings under question; (2) selecting your materials and equipment so that they will give maximum performance over what you expect the life of the building to be; (3) getting out and asking for planning service help on those details which bother you.

There's plenty of the latter available. The representatives of your state agricultural college are paid by Uncle Sam and you to help you with suggestions, lists of materials, and blueprinting—to say nothing of valuable supervision on those jobs they pick as suitable for demonstration. Your county agent and home demonstration agent are first points of contact here.

Then you must not overlook the manufacturers of the equipment you need—lumbermen, hardware makers, glass men, roofers, electrical manufacturers. They too maintain extension and research divisions that are at your command. If you have a problem on a specific material, write your manufacturer. He regards as part of his scheme of things the making his products do exactly what he says they'll do—*on your farm*. And you may be sure that the manufacturers of materials and equipment advertised in *Successful Farming* will stand back of their product not merely with service but with replacement in case of dissatisfaction. Our magazine advertising guarantee, displayed on the back of this book, covers this point.

We strongly urge, too, that you consult your local dealer immediately. Many farmers are hesitant about throwing themselves open to sales effort before their minds are made up, while they are shopping around. This is a mistake. Remember that your dealer has been selected carefully by the manufacturer to represent the line in your territory, to apply it to your problems on the spot. Only by visits to the several dealers in your territory, only by seeing and feeling certain of the goods you plan to buy, can you make a completely confident choice.

Last, and we hope not least, is the how-to help that the trained staff of your magazine itself can offer you upon receipt of a card or letter from you.

As you have read in this book, the many plans we offer, both of homes and service buildings, can save you hundreds of dollars and can result in highly satisfactory, farm-tested buildings. The smaller Proved Details will give you step-by-step help in cutting and assembling, casting, drilling, and laying all manner of home improvements. Back of this library of practical building detail is a staff of many editors, rural architects and engineers, and consultants who will, upon receipt of word from you, answer your building questions quickly, in full detail, and in confidence. Where our resident staff cannot find a satisfactory answer, we'll send your letter on to some consultant specialist who can—all without the slightest cost or obligation or without making your name available to any commercial interest.

Now there are 9 big materials classifications from among which you will choose as you put up your home or service buildings or repair and remodel. Briefly, from our past experience, we have commented on them in the following paragraphs:

1. Central Heating

The kind of fuel you can command, both from the point of view of price and local availability, will pretty much dictate central heating equipment selection. The pipeless furnace, of which the well-known space heater for first-floor use is but a handy cousin, can be set for gas, oil, wood, or coal. Refinements on these single-outlet heaters or furnaces bring, of course, additional cost and additional installation planning—plus additional comfort and distribution of heat. Where electricity is available, the forced-air furnace (with a fan to drive warmth into every corner) is a wonderful answer, but the gravity-type (where air movement is based on the principle that hot air rises) is effective and, installed with competent help, will perform its job well. Stokers, also dependent upon current, are a refinement for either type and, hooked up with a thermostat, make furnace tending practically a lost art. Naturally, best of all are oil and gas if you want completely automatic performance. New steam and hot-water systems are deserving of notice where a large house is contemplated.

2. Electricity for Power and Light

When you wire your farmstead, wire for every possible need you *may* have in the way of current capacity. Current is like water in a pipe; if the pipe's small the water output is small. In addition, current flowing thru a too-small wire heats that wire thru resistance and may cause a serious blaze.

The wires from the central distribution point to the home should be of such size that the voltage drop at maximum load will not exceed 2 percent of the voltage at the point where the power company's wires join yours. Second only to the correct-sized wires is provision for special, heavy-duty circuits and outlets for range, water heater, large motors, elevators, and so on.

Don't forget PLENTY of outlets. In the planning section on pages 4, 5, and 6 we stressed planning for every conceivable electrical need in placing convenience outlets—and then throwing in one more per room for money's worth measure. Everything we've said here about house wiring goes for service buildings with the exception that there you'll need more heavy-duty circuits.

3. Water Supply and Plumbing

The pumps and water mains you wish should be chosen on a capacity basis. Your dealer or your college staff can tell you about the water supply in your vicinity and show you an interesting table which will give you the average number of gallons needed on your farm figured on the basis of human needs, stock, crops.

Whether you use a flow reservoir, a windmill, a fuel-driven pump, or a pump powered by electric current will depend upon the location of your farm and the condition of your pocketbook. Depth of well and carry of pipe, atmospheric pressure and pipe friction will present another set of standards. The essential is water piped to the kitchen of the house, and water to service outlets; upon that fundamental basis the rest can be built.

Don't tackle house plumbing without the help of a competent plumber—and see to it that he valves each branch line so that you can shut off any particular fixture in any particular room without shutting off the whole plumbing system.

Get fixtures of high quality that will be backed by the dealer who installs them. There is no such thing as saving a dollar on cheap plumbing it you allow yourself a reasonable rate of pay for the tinkering time you'll have to put in on it.

4. Insulation

The dollar values of insulation are brought out in the storm-proofing article appearing on page 18. The three most common forms of insulating materials—

fill, blanket, or board—cannot be evaluated or compared safely because they, too, are governed by use. In a remodeling job where it is not practical to remove either siding or interior facing, fill insulation is the *only* answer. Where some structural rigidity is desired along with insulation, the hardboard varieties of board insulation are the only answer. And where insulation has to be package-wrapped around corners or stuffed around corners, your answer is the blanket or batt type. One warning: good insulation thinking today advises that some kind of vapor barrier be placed on the inside or *warm* wall.

5. Paints and Painting

House and barn paints are in two general classes—hard and soft. Hard paints require more frequent renewal, but less renewal coating, while soft paints chalk (which really means they oxidize) more easily and are less likely to crack or peel over a long period of time. They are more self-cleaning than the hard paints, but out on the farm away from soot this is not a tremendous factor. Conventional white-lead-and-linseed oil is a good example of a soft white paint; it wears thin gradually and may look reasonably well even after considerable neglect. Hard paints, containing lead and zinc, or lead titanium and zinc, or some hardening substitute for linseed oil, have certain advantages under some circumstances: they take tints to better advantage, have greater hiding power, and give a harder finish.

Other types of paint have special uses. Aluminum paint has been found excellent for priming coats. There are numerous commercial fillers for sealing new wood. Deck paints and hard exterior enamels are used for trim and where traffic may be expected. Plaster and some building boards call for wall paints running from glossy to flat. Casein paints and stabilized calcimines are inexpensive and effective. Stains are legion, and many stains and dips are made especially for shingles.

In getting the right paint job, choose the right day. Temperature should be over 40 degrees and the humidity not excessive. All rough and cracked paint should be removed by scraping and/or removers. Fill up cracks and nail holes with putty after the first coat has gone on. Buy plenty of paint. It is better to have too much than too little for it is hard to match tints in the middle of a job. Leftovers can be used for odd jobs. Use three coats on new wood, two on previously painted surfaces where the old finish is in reasonably good condition.

6. Roofing

Protection, permanence, cost, and beauty are the four factors you'll have to balance on your roofing ledger. Here again there is no best roofing, for length of structure life, cost, and maintenance figure in.

The roofing varieties usually found on the farm are: wood, composition, asphalt, asbestos, and steel. The wood shingle is oldest in service. Light in weight, it has excellent insulating properties and can be colored as desired. Properly treated to prevent warping and fire hazard, it will give good service for years. Be sure the grain is vertical and straight to insure best drainage. A shingle long enough for three laps is better than one allowing for only two, and the price difference may be only $15 to $25 for an entire house.

The composition roofings, stone or slate surfaced, are easy to apply since they come in strips, are self-aligning and self-spacing, assuring a correctly aligned and symmetrically patterned roof without expert labor. All composition materials are better applied on warmer days.

Definitely fire-resistant are the asbestos and asbestos-cement shingles. Heavier, requiring a more solid underpinning, they rank high in trouble-free, long service because they do not require paint and because the higher grades may be had in a vitreous surface which is easy to wash clean.

Steel in the form of corrugated or V-crimped sheets is practical for general roof and siding use. A good steel roof should be adequately grounded and, where paint is indicated, should either be allowed to weather for a paintable surface or should be bought in an already prepared surface which will form a good paint base.

7. Windows

The subject of glazing (putting in window glass to us) has also been treated in Storm-proofing, but keep your eyes on the manufacturers of the new ray-passing glasses, on the molders of glass brick and tile, and on the manufacturers of metal and wood casements—who are all heading toward a more liberal use of light space for efficiency, with no loss in insulating values.

8. Interior and Exterior Walls

Getting your money's worth in walls isn't hard if you've planned just how long you want the building to last, how valuable are its contents in relation to destruction by fire, how strong the siding must be to resist wind and snow strains.

Milled wood is the easiest to obtain with a cost comparatively low; it is easily worked by inexperienced help, is a fine insulator, looks right, and is one of the strongest of all materials for its weight. It does, however, present a fire problem, tho reasonable care and painting will counteract this to some extent. Concrete used either solid or in blocks is good. Reinforcing must be taken into consideration in the solids. Its disadvantages are considerable weight, lack of elasticity, and the necessity for time for curing except where a special quick-cure mix is bought. Brick is a wonderful wall material, strong enough for most structures, and easily adapted to most designs. However, for the farmer, brick is often unavailable unless brickyards are operating within the region so that frieght rates are not prohibitive. Hollow building blocks or what are commonly known as building tile are lighter per unit of surface and have a greater insulating value. Steel is one of the best possibilities, is permanent, impervious to vermin, tight and closed against possibility of air leakage—but it is a poor insulator and must be backed by some form of insulation. The cost of this, in turn, is somewhat offset because of its low maintenance cost. The newcomer to the field is a composition siding such as the one made of asbestos fibers and cement in precast sheets or in strips. There is a definite insulating value, and, altho first cost is high, the maintenance is probably less than any other material.

Interior walls have in the past been almost wholly of lath and plaster. Wood lath is low in first cost, but is more likely to buckle, shrink, and expand. A refinement, gypsum lath or plaster board, is a fireproof, porous sheet having high insulating values and holding size and shape excellently. Wire and metal laths have been developed to a high degree of satisfaction and there are also good insulating laths of porous wood or vegetable fibers. A newer development is the suspension of standard lath sheets to supports by metal clips; it saves installation costs.

Plaster finishes have been given much mention—paint or paper. Beautiful effects may be had in finish by the use of wood paneling. Wallboards and building boards, many of them with enameled, hard tile surfaces may be used either as wainscoting over a new plaster wall or may completely cover old plaster without sizing and crack-filling. Wallboards and building boards, which give a very pleasant finish when beveled and paneled in their natural colors, are also available in wood-simulating surfaces which are highly effective. Linoleums are wonderful wall surfaces where moisture and cleaning are factors in daily use. The list is endless and recommendations must rest upon the individual building. Keep just one thing in mind: your dealer's recommendations should be asked before a job is begun, because workability and suitability to various jobs are factors which come only with experience.

9. Floors and Floorings

Flooring ordinarily recommended for city homes must be viewed with a practical eye on the farm where traffic is heavy and mud, water, grease, and acids are hardly unknown no matter how you try to leave them outside. Wood, linoleum, concrete, rubber and cork, tile, and various compositions are the choices. Wood may now be had in plank, strip, and block, and in various prefabricated, pre-varnished units which make for very rapid installation. Linoleum, furnished in tiles as well as in rolls, is easily worked and lends itself beautifully to inlays and borderings. Like wood, linoleum must be maintained with wax if you want your money's worth, and it must not be washed with strong detergents which tend to dry it out. Concrete for utility rooms and even for the entire house is a permanent material that wins much applause. Surface coloring and staining of concrete should be done only with the aid of your paint dealer, but many coloring compounds are available that can be mixed into the cement as it is made ready for pouring. Asphalt, rubber and cork, and tile floors present possibilities which the average farm architect has passed by in the past, much to his discredit. They lend themselves to the desired color treatments and also can take the daily beatings that farm family traffic brings.

Hardware, lighting fixtures, and so on are all part of the job, and all require as careful selection as the major structural materials mentioned above. Let us repeat: make sure thru your material dealers' advertising and product guarantees that you are contacting a well-known, generally accepted brand that is not a "just-as-good." Put your dealer, your manufacturer, your college, and your magazine to work for you. You'll come pleasantly close to that high goal you set for yourself when the idea for your building first came into your mind. For a further entry on the credit side of building, please turn to the $3,000 contest announcement on page 74.

$3,000 of Defense Bonds!

For You Who Improve the Efficiency and Comfort of Your Farm

THE national spotlight today is turned on the farmer as a producer of essentials without which our nation and other nations cannot survive. In order to produce better, faster, with less labor, the farmer and his family must have workable farm buildings. Storage and shelter for vital stock and crops, shelter and comfort for farm workers are "musts."

To accelerate getting these "musts" and putting them to work, *Successful Farming* is launching its second big building contest, this one to stress EFFICIENCY IN SERVICE BUILDINGS AND LIVABILITY IN THE HOME.

Awards of Defense Bonds

Every farmer who betters his position as an essential producer by a more efficient building, a more comfortable and attractive home, a handier motor placement, better feed bunks, faster loading chutes—hundreds of other improvements—has an opportunity to cover a part of his investment thru our bond awards. U. S. Defense Bonds ($3,000 total maturity value) will be given for—

The most efficient new service buildings

The most efficient remodeled service buildings

The most livable and attractive rooms

Large and Small Projects to Share Equally

No matter how small or large your improvements may be, whether you spend a few dollars, a hundred, or several thousand, your chance to win is the same. A glance at the prize groupings at right will prove that. Each entry will be judged, not on the *size* of the building or remodeling nor on numbers and cost of equipment, but on *how well* it has been done, how much it contributes to the welfare and abilities of the whole family.

CONTEST RULES

1. The 1942 contest is divided into three sections: I, New Service Buildings; II, Remodeled Service Buildings; III, Home Improvement.

2. Anyone may enter this contest providing he is a real dirt farmer and providing he is not in the employ of the Meredith Publishing Company.

3. You may enter as many separate building projects as you wish, or different members of your family may enter different building projects.

4. The size or cost of your projects does not matter because judging will be based on: (a) increase in the efficiency and comfort of you and your farm family; (b) adaptability to your farmstead and to your farm business; (c) appearance.

5. The decision of the board of judges will be final; in event of ties, duplicate bond awards will be made. All material entered in the contest becomes the property of *Successful Farming* either for editorial or advertising use, and no entries or entry material can be returned unless by special arrangement.

6. Your building project must have been completed between January 1, 1942, and December 31, 1942. Projects begun before January 1, 1942, but completed after that date are eligible.

The envelope containing your final entry form (see 7) must be postmarked before midnight of December 31, 1942. Be sure to write your name and address on every piece of contest material you send. Address your entries to Kirk Fox, Editor, *Successful Farming*, Des Moines, Iowa.

7. A form for your Final Contest Report will be mailed to you several months before the closing date of the contest, December 31, 1942. Should you desire a final contest form before that time, a letter to *Successful Farming* will bring it to you immediately.

The following project sections and prize listings should be studied carefully to determine the right group for your building:

Section I—New Service Buildings

A. You may enter your new service buildings in these groups: Group 1 for new service buildings costing up to $150; Group 2, $150 to $500; Group 3, $500 to $2,000; Group 4, $2,000 or over.

B. Your contest material should consist of a Final Contest Report completely filled out, plus the following:

1. A sketch of all floor plans showing dimensions of interior divisions, locations of windows and doors, electrical outlets, and so on. Blueprints are desirable but are not necessary for eligibility.

2. At least two snapshots taken from opposite corners of your new buildings so that all four sides of each building are shown. Interior photographs will be helpful to the judges, but are not necessary.

3. A rough sketch of your farmstead showing location of new service building or buildings in relation to other farm structures.

4. A list of materials and costs, including outside labor, and the estimated number of hours of labor contributed by you and your family.

5. A letter describing your experiences in the construction of your new service building or buildings and how you expect the project to increase your efficiency and the efficiency of your farm.

Section II—Remodeled Service Buildings

A. You may enter your remodeled service buildings in these groups: Group 1 for remodeling costing up to $150; Group 2, $150 to $500; Group 3, $500 to $2,000; Group 4, $2,000 or over.

B. Your contest material should consist of a Final Contest Report completely filled out, plus the following:

1. A rough sketch of the floor plans (before and after) which the remodeling project affects—showing dimensions, location of windows, doors, electrical outlets, and so on. In case your project changes the exterior of your service building, "before" and "after" snapshots are desirable, but not necessary. Interior "before" and "after" pictures are also desirable, but not necessary.

2. A rough sketch of your farmstead showing the location of the remodeled service building or buildings in relation to other farm structures.

3. A list of materials and costs, including outside labor, and the estimated number of hours of labor contributed by you and your family.

4. A letter describing your experiences in remodeling and how you expect the results to contribute to your efficiency and the efficiency of the service building or buildings.

Section III—Home Improvement

A. You may enter any new or remodeled single room or rooms or entire new or remodeled homes (furnishings and equipment qualify as livability improvements as well as structural features or changes) in one of four groups:

Group 1 for projects costing up to $150; Group 2, $150 to $500; Group 3, $500 to $2,000; Group 4, $2,000 or over.

B. Your contest material should consist of a Final Contest Report completely filled out, plus the following:

1. A rough sketch or blueprint of all floor plans showing dimensions of rooms, access to other rooms in home, locations of windows and doors, electrical outlets, and so on. In the case of remodeling, "before" and "after" floor plans are required.

2. Snapshots of the exterior of all new homes; snapshots of the exterior of all remodeled homes providing the remodeling affects the exterior. "Before" and "after" snapshots of remodeled home interiors will assist the judges immeasurably, altho they are not required for eligibility. Interior snapshots of new room finishes, location of furnishings and equipment, built-in features, remodeling features, and so on, while much more difficult to take, should not prove impossible if there is an amateur photographer in the community.

3. A rough sketch of your farmstead giving the location (show points of the compass, North, South, East, and West) of the house in relation to other farm buildings.

4. A list of materials and costs including outside labor and the estimated number of hours of labor contributed by you and your family.

5. A letter describing your experiences in furnishing and equipping your room or rooms, in remodeling a room or building it new, or in remodeling or building new a farm home. Please indicate in what way you feel this project (or projects) has added to the efficiency, essential comfort, and morale of your farm family in their daily work.

$ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $

72 BIG PRIZES

Section I—New Service Buildings . . . . . $1,000 of Bonds

Group 1 (costing up to $150)		Group 2 (costing $150 to $500)		Group 3 (costing $500 to $2,000)		Group 4 (costing $2,000 or over)	
1st	$100	1st	$100	1st	$100	1st	$100
2nd	50	2nd	50	2nd	50	2nd	50
Next 4	25	Next 4	25	Next 4	25	Next 4	25

Section II—Remodeled Service Buildings . $1,000 of Bonds

Group 1 (costing up to $150)		Group 2 (costing $150 to $500)		Group 3 (costing $500 to $2,000)		Group 4 (costing $2,000 or over)	
1st	$100	1st	$100	1st	$100	1st	$100
2nd	50	2nd	50	2nd	50	2nd	50
Next 4	25	Next 4	25	Next 4	25	Next 4	25

Section III—Home Improvement . . . . . $1,000 of Bonds

Group 1 (costing up to $150)		Group 2 (costing $150 to $500)		Group 3 (costing $500 to $2,000)		Group 4 (costing $2,000 or over)	
1st	$100	1st	$100	1st	$100	1st	$100
2nd	50	2nd	50	2nd	50	2nd	50
Next 4	25	Next 4	25	Next 4	25	Next 4	25

$ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $ $

★ SUCCESSFUL HOMES AND SERVICE BUILDINGS ★

$6.50/23